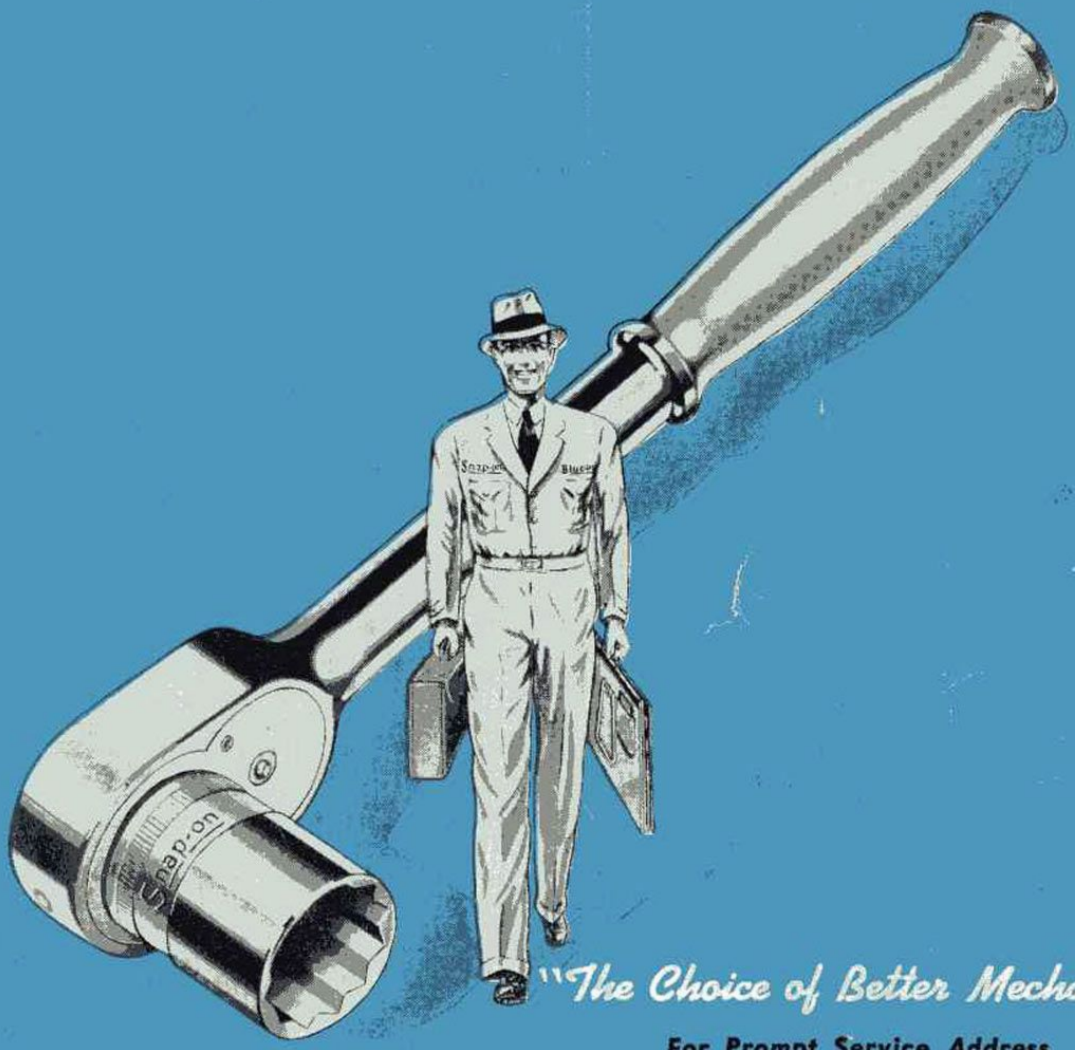
1946

Snap-on WRENCHES

Blue-Point MECHANICS' TOOLS



"The Choice of Better Mechanics"

For Prompt Service Address

SAN FRANCISCO BRANCH

276 Golden Gate Avenue

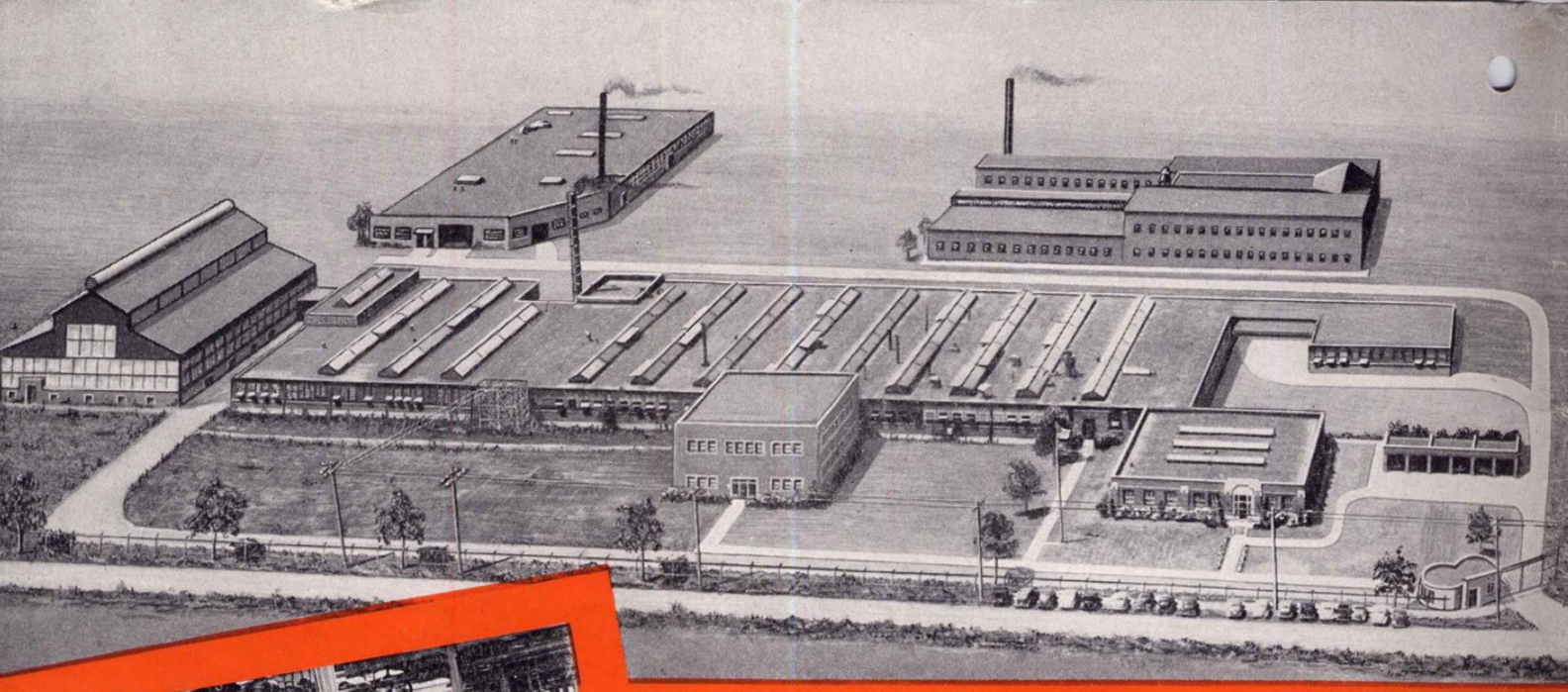
San Francisco 2, Calif.

Telephone: Prospect 5338

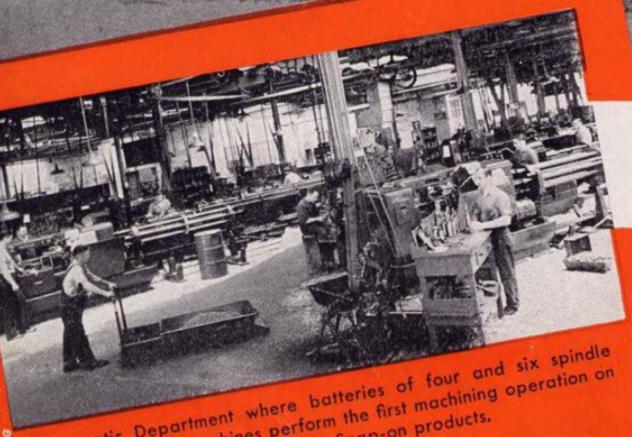
CATALOG "R"

SNAP-ON TOOLS CORPORATION

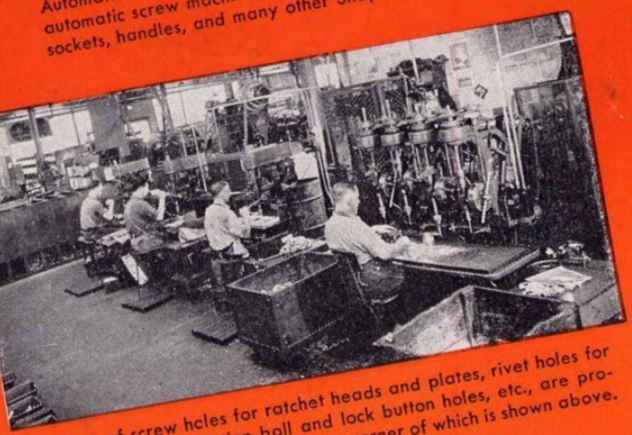
KENOSHA · WISCONSIN



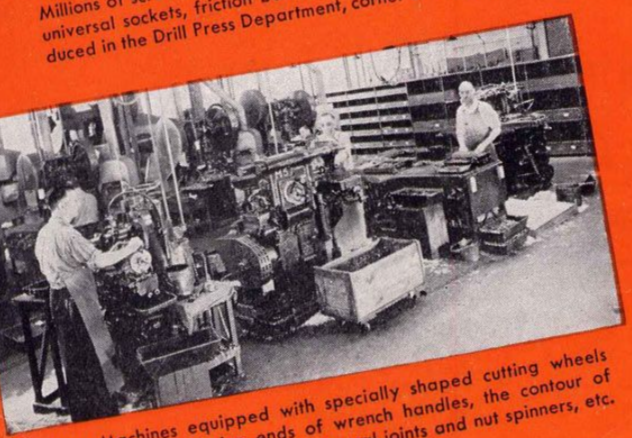
Bird's-eye view of the combined factories and offices of Snap-on Tools Corporation showing Plant No. 2 at Mt. Carmel, Illinois, upper left; Plant No. 3 at Newport, Pennsylvania, upper right; and Plant No. 1 and general offices at Kenosha, Wisconsin, in the foreground.



Automatic Department where batteries of four and six spindle automatic screw machines perform the first machining operation on sockets, handles, and many other Snap-on products.



Millions of screw holes for ratchet heads and plates, rivet holes for universal sockets, friction ball and lock button holes, etc., are produced in the Drill Press Department, corner of which is shown above.

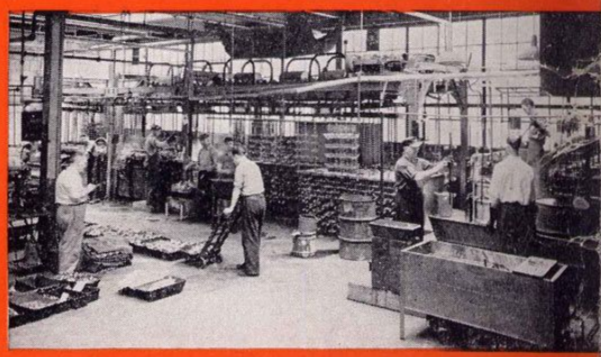


Milling Machines equipped with specially shaped cutting wheels shape the square drive ends of wrench handles, the contour of ratchet pawls, working slots in universal joints and nut spinners, etc.

Heat treating equipment consists of furnaces of modern design and efficiency, providing specialized types of treatment necessary to the hardness and toughness of specific tools or parts of tools.



After heat treatment, tools are polished to a mirror surface and degreased. In electrolytic baths, tools first receive a rust-proof nickel armor, and finally a glistening chromium top coat.



Skilled workers assemble parts into complete tools, in some cases before the plating operations, and in other instances, such as assembly of ratchet mechanisms, after the various parts have been plated.



Snap-on Tools THE CHOICE OF BETTER MECHANICS

Snap-on Tools
THE CHOICE OF BETTER MECHANICS

CATALOG "R" Issued August 1, 1946

Supersedes all previous catalogs

Copyright, 1946, Snap-on Tools Corporation

OUR GUARANTEE

"Snap-on and Blue-Point tools are built to meet the exacting and particular working requirements of professional mechanics. The product of an organization that is committed to the highest quality it is possible to produce.

"Every tool manufactured and sold by this company has been carefully inspected before leaving the factory and, to the best of our knowledge, is free from defects in materials or workmanship. Any tool found to be defective in *materials* or *workmanship* will be replaced cheerfully. Tools which have failed for reasons other than those stated above, or because of abuse, intentional or unintentional, will not be replaced."

Electrical Tool Guarantee

Every Snap-on—Blue-Point electrically driven tool is thoroughly tested under load and checked for possible electrical and mechanical defects before leaving our plants. However, we will gladly replace without cost any parts of a tool which we find to be defective in material or workmanship, provided the tool is returned to the nearest Snap-on branch (see inside back cover) with all transportation charges prepaid, and provided that no other repair work has been performed by others. This is the only electrical tool guarantee, written or verbal, authorized by us.

Torqometer Guarantee

Snap-on Torqometers are thoroughly tested and inspected before leaving the factory and warranted to be in perfect working condition . . . we will repair or replace free of charge any parts that prove defective within 90 days from date of delivery, or repair at nominal service charge any part which (in our judgment) has been misused or damaged, providing no other repair work has been performed by others.

PROFESSIONAL mechanics throughout industry, in every phase of product assembly and customer service, depend on and take great pride in their hand tool equipment and demand the finest quality tools available . . . for even on the simplest operations, fine hand tools pay big dividends in speed, good workmanship, greater safety. On difficult operations they are indispensable.

Snap-on meets this demand by making available, through its direct-to-customer distribution the finest tools that steel technology and modern manufacturing methods can produce.

The different high carbon alloy steels used in Snap-on and Blue-Point tools are the finest available for the purpose . . . machined to precision tolerances and uniformly heat treated and hardened from skin to core in continuous electrically heated and controlled furnaces. To provide extreme wear-resisting surface hardness to such parts as ratchet pawls and bearings, etc., modern carburizing furnaces are used.

Compare Snap-on Blue-Point tools with any other make which you consider to be of high quality and let the actual working performance prove their superior values.

IMPORTANT NOTICE
All Prices Are Net to the Trade.

Prices shown in the current price list applying to this catalog are subject to change without notice. In the event of future price changes, orders will be billed at the prices in effect at the time of delivery.

•

We reserve the right to make changes in design or construction at any time without incurring any obligation to incorporate such changes in tools or equipment previously sold . . . also to discontinue the manufacture of any tools or equipment at such time as we deem it necessary. All dimensions shown in this catalog are subject to commercial tolerances.

•

★ Note: This symbol is used throughout the catalog to indicate those tools which, because of their nature, are liable to abuse and therefore are not subject to replacement.

•

Information contained herein supersedes that given in any previous issue of our general catalog of standard tools.

SNAP-ON TOOLS CORPORATION
KENOSHA, WISCONSIN

Factories at Kenosha, Wis., Mt. Carmel, Ill., Newport, Pa., and Long Branch, Ontario

Branch Sales Offices and Warehouses Located in 40 Principal Cities . . . See Inside Back Cover

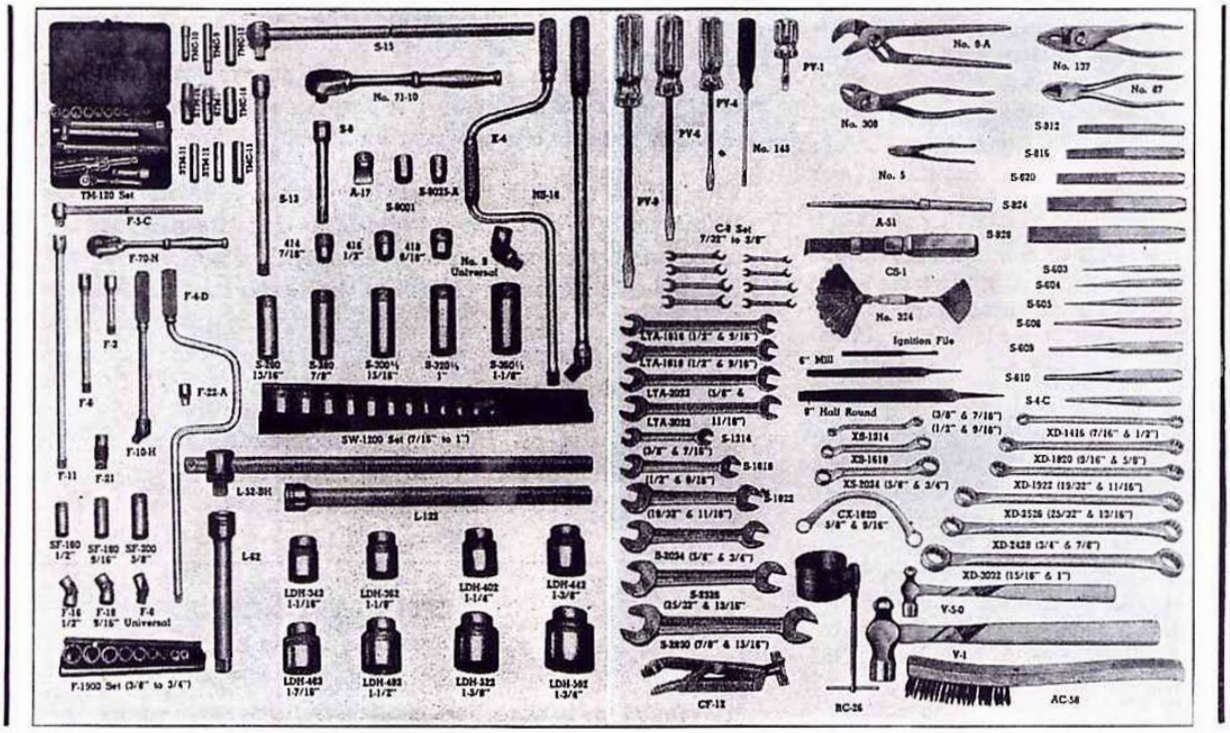
No. 488 SUPER SERVICE SETS

Trade-Name Registered U. S. Patent Office

BRING on your *wrecks* . . . your *rush* jobs . . . your *tough* ones! You're ready for anything when you are equipped with this complete set of Snap-on—Blue-Point tools . . . ready with the *right* tool, the right *size, strength, balance, feel,* and *fit* to do the work quickly, safely, efficiently. It's the Set you ought to own *—and you know it.*

Start to own it NOW! Purchase it complete or get it together piece by piece, and then keep it under lock and key in the roomy, handy K-55R Snap-on Tool Chest. Owning the No. 488 Set is easier than you think . . . you possibly already have some of the tools—small purchases at frequent intervals will quickly add the others. It's cheaper to *install good tools* than to *stall good customers.*

HERE'S THE SET YOU OUGHT TO OWN . . .



Set Contains 151 Tools

The full range of the socket wrench equipment extends from 3/16" to 1¾" inclusive and runs through four sizes of handle equipment—*Midget—Ferret—Master—Heavy Duty.* Handles include Ratchets, Speeders, Nut Spinners, Combination Sliding Tees and Offsets, Universal Joints, Extension Bars . . . Every possible type of hook-up is instantly available. Open Ends, Tappet and Boxocket Wrenches round out the nut turning equipment, and hand tools such as Chisels, Punches, Screw Drivers, Pliers, Hammers, Files, and miscellaneous necessary items like valve tools and piston tools are also contained in this set.

The Last Word in Completeness and Selection

Never before have such a wide range and selection of matched wrench units and mechanics' hand tools been made available in one complete set . . . *top-notch* mechanics everywhere have long expressed a wish for such an outfit. Here is *your* chance to provide yourself with that set. We have selected the various tools to cover all types of service and repair jobs from ignition to Heavy Duty rear end work—all the standard tools needed are included.

Set Offered Complete in K-55R Tool Chest

There is plenty of room in this fine chest to accommodate not only the contents of the No. 488 Super Service Set but many of the other small tools which you undoubtedly own. Six drawers of different size, plus three open-top compartments, make it an easy matter to keep your set in just the arrangement you find most convenient (See full description on page 44).

NO. 488—SUPER SERVICE SET. Tools only .....
NO. 488-B—SUPER SERVICE SET. Complete in K-55R Tool Chest...



SNAP-ON—BLUE-POINT TOOLS . . . *The Choice of Better Mechanics!*

NO. 497 SNAP-ON "PROGRESSIVE" NUT TURNING SET

Trade-Mark

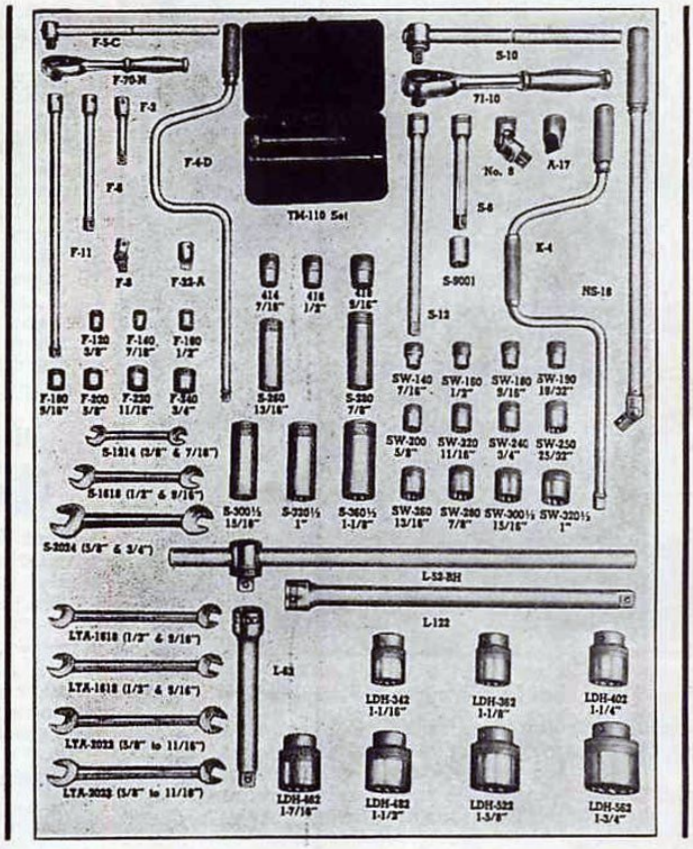
GOOD TOOLS—*Snap-ons*, and plenty of 'em—are your best advertisement. It pays to have your customer see them when he gets his car—and it pays to use them for the time they save and the better work they do. For instance, the No. 497 Progressive Nut-Turning Set contains a full range of wrenches required by a "top-notch" mechanic to do "top-notch" work. Industrial machinery today is complex and tremendous in scope . . . repairs must be made quickly . . . *breakdowns* must not be allowed to result in *shut-downs* . . . speed and efficiency must be obtained in all production and maintenance operations. Throughout Industry as a whole, Snap-on—Blue-Point tools are specified and recommended.

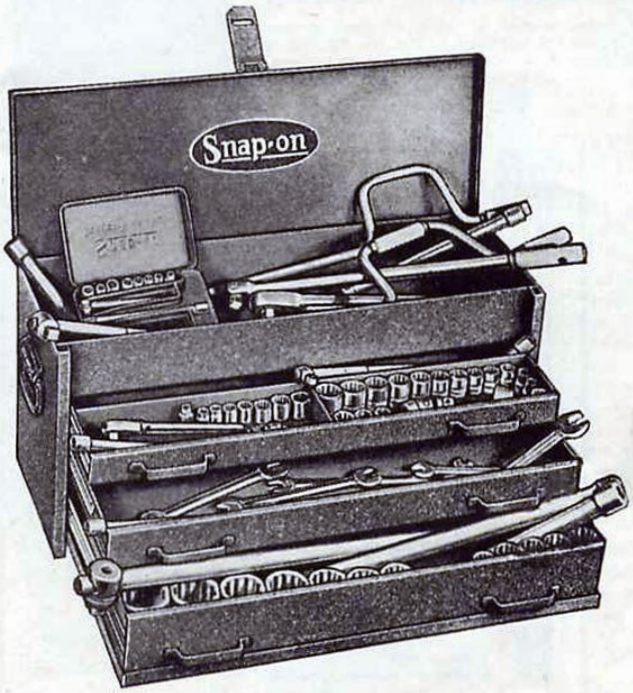
Tools That Men Like to Use

Every mechanic enjoys using good tools. The *design . . . balance . . . finish . . . size . . . construction . . .* all have a definite reaction that makes them a pleasure to hold and use. More important, however, than the mere appearance is the unseen qualities which are built into every Snap-on unit . . . *Strength . . . Performance on the job . . . Uniform highest quality . . . Safety . . . Service.* Every unit in this nut-turning set has been engineered to deliver the utmost value and utility . . . from the ¼" Midget socket to the 1¾" Heavy Duty Loxocket, the long, slender Ferret Handles for close quarter work to the powerful Heavy Duty units, you are assured of matched high quality and long, continuous service. Snap-ons are truly the tools men like to use.

Set Contains 71 Wrench Units

A full range of Socket Wrenches from ¼" to 1¾", including 6 Midget (¼" square drive) Hex Sockets ¼" to 7/16", 2 Midget Square Sockets ¼" and 5/16", 7 Ferret (⅜" square drive) Hex Sockets ⅜" to ¾", 12 Master (½" square drive) Straight-Walled Hex Sockets 7/16" to 1", 5 Extra Deep Hex Sockets 13/16" to 1⅛", 3 Square Sockets—7/16", ½", and 9/16", and 7 Heavy Duty Loxockets 1 1/16" to 1¾". Every conceivable type of handle is included, and a satisfactory wrench and handle combination can be quickly adapted to any nut turning problem that may be confronted.





Every Type of Handle Combination Included

Types of handles include a combination Sliding Tee and Offset Handle in Midget, Ferret, Master, and Heavy Duty series; Midget Speeder Tee; Extension Bars in 3 Ferret, 2 Master, and 2 Heavy Duty sizes; Ferret and Master Ratchets, Speeders, Universal Joints, and Screw Driver units; and a Master Nut Spinner Handle.
In addition to this socket wrench equipment, we have included the six most generally needed sizes of Open End Wrenches and the four Tappet Open End Wrenches which are most usually required for automotive servicing work.

Set Offered Complete in K-23W MechaniKit

One large open-top compartment and three good big drawers give you plenty of room for the No. 497 Set and any other hand tools you might possess. Drawers are divided in convenient compartments for segregating the equipment into handy sections, and the top compartment is handy for those tools most generally in use. Built of heavy gauge steel and locking securely with a padlock, it provides a safe "home" for your tool outfit . . . no more hunting for "mislaid" tools when you lock them safely in this splendid box (See page 48 for complete description).

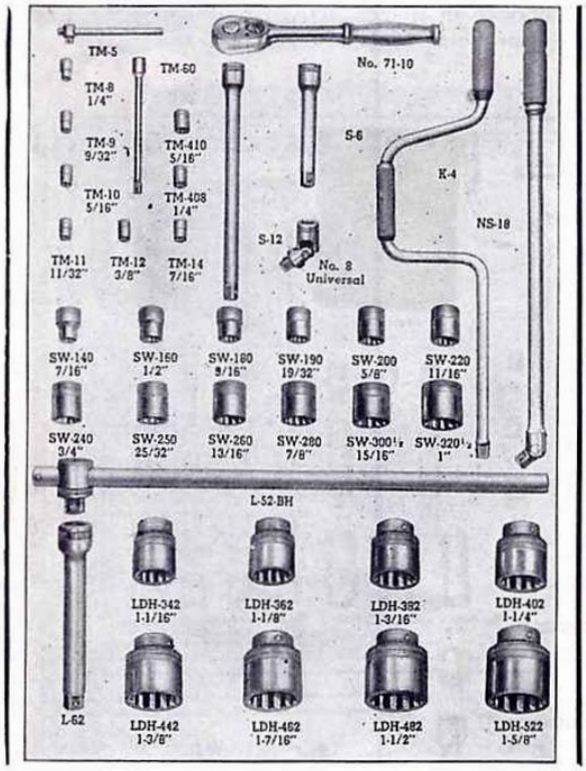
No. 497 PROGRESSIVE NUT-TURNING SET. Tools only .....
No. 497-B PROGRESSIVE NUT-TURNING SET. Complete in **K-23W MechaniKit** .....

For Twenty-five Years the Standard of Highest Quality

NO. 477Y MASTERMECH SOCKET WRENCH SET

Trade Mark

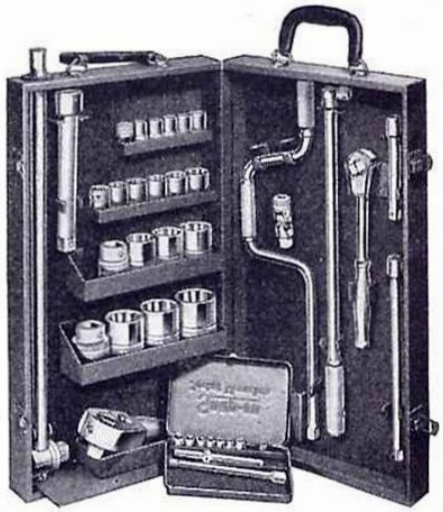
GET rid of odds and ends of time-wasting "misfit" tools. Replace them . . . set by set or piece by piece . . . with Snap-on and Blue-Point *matched* unit tools. Get the *feel*, the *balance*, and the sure, fast, nut-turning efficiency that goes with Snap-ons. Know the powerful effect on YOUR business that the sight of "good tools and many of them" has on your customers who see your shop. The No. 477 MasterMech Set gives you a good selection of *matched units* in a general purpose socket wrench set.



Socket Range ¼" to 1⅝"

Including a complete range of hexagon sockets ¼" to 1⅝". Twenty-eight sockets and eleven handles (including the heavy duty ratchet shown at the right) that provide the right wrench combination to handle practically any nut turning job with speed and safety.

Special Cabinet for No. 477-Y Set



The B-100 Cabinet was especially constructed to hold all units of the No. 477-Y Set. This cabinet provides a *place for every tool* . . . makes it easy to check 'em up.

It stands upright when open, with all the tools in plain sight and handy to use . . . they're easy to grab in a hurry. Comfortable leather handles and the long, flat shape make it easy to carry. It is fitted with full length piano type hinge and is finished in grey enamel . . . sturdily built from heavy gauge steel and spot welded.

Heavy Duty Ratchet Head Included



Many mechanics working on trucks, etc., will find the Heavy Duty Reversible Ratchet Head a most valuable addition to this set. Locked on the end of the Sliding Tee Bar it is both a powerful and efficient wrench. See description on page 18.



Set Contains 39 Units

NO. 477-Y—SET COMPLETE WITH HEAVY DUTY RATCHET HEAD. Tools only .....
NO. 477-Y—WITH CABINET.....
B-100—SPECIAL METAL CABINET.....

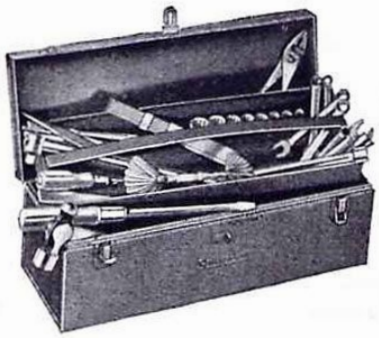
Cabinet Accommodates No. 85 Ferret Set

To the mechanic who wishes a 100% efficient socket wrench kit, we suggest the addition of the No. 85 Ferret Set described on page 8. It can be carried as shown.

No. 490 General Service Set

Especially suitable for the mechanic starting to build up his tool equipment . . . this set provides a *basic selection* to which he can add other *"matched units"* as he feels the need for them.

It's the well equipped mechanic who gets ahead—don't let *"misfit"* tools hold you *back*. When you are "ready for any job," then more business is ready for you.

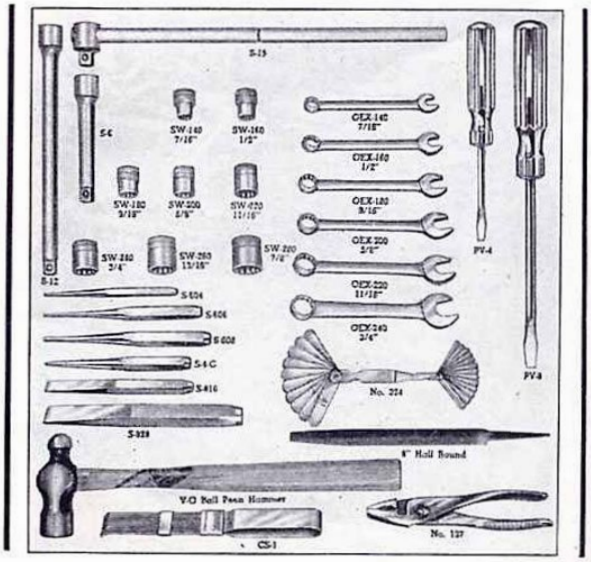


Set Contains 30 Units

Socket Wrenches, Combination Wrenches, Screw Drivers, Chisels, Punches, Hammer, File, Pliers, Carbon Scraper, and Feeler Gauge. An outfit that will handle much of your everyday run of jobs.

This equipment comes to you in the sturdy K-24 Metal Case illustrated (See page 49 for further description). Note the handy tool tray. Case fitted with hasp for padlock.

NO. 490—GENERAL SERVICE SET. Tools only .....
NO. 490-B—GENERAL SERVICE SET. Complete in K-24 MechaniKit.....

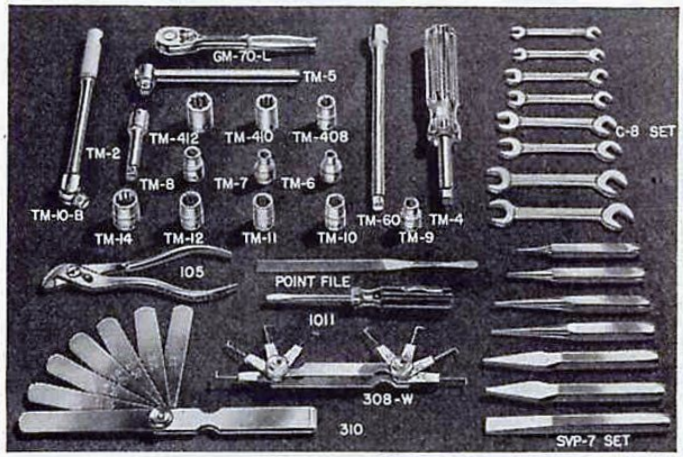


Trade Mark MIDGET WRENCH SETS

(¼" Square Drive)



THESE tiny tools, *built and sized to precision tolerances*, put added dexterity into the work-hardened hands of every man whose job entails the assembly or repair of small pieces of machinery or other equipment—while for women assembly workers Snap-on Midget tools are the ideal complement for their small, nimble fingers. So don't be a "fumble-thumb" when you have these tiny, tricky jobs to do—lay aside those "too big" tools and put speed and working pleasure into your work with tools tailored to the job.



Contents of TM-130 Set Midget Tools

TM-130 Midget Utility Set

Here is the set you need to handle all those tricky little jobs which call for accurate touch and precision rather than power and leverage . . . a real utility set of midget tools for garage or service station, airline maintenance mechanics, industrial production and maintenance departments where small machines or instruments must be assembled or serviced. Others who have found this set the answer to their tool problems are movie cameramen and projector operators . . . typewriter, dictaphone and other office machine service men . . sewing machine, radio and other electrical repair shops . . . gas, water and electric departments, etc., in fact, everyone working where there are small machines to be repaired or adjusted.

Set Offered Complete in MIDGET HOLD-ALL

This set includes midget hexagon sockets 3/16", 7/32", ¼", 9/32", 5/16", 11/32", 3/8", and 7/16", also square sockets ¼", 5/16", and 3/8"; and wrench handles as illustrated . . . eight midget open end wrenches 7/32" to 3/8" . . . midget chisels and punches, screw driver, pliers, point file, feeler gauge and spark plug gauge.

Each tool is proportioned and built to Snap-on's high standards of design and quality, and wrench openings are machined with the utmost precision to insure accurate fitting to tiny nuts or bolts.

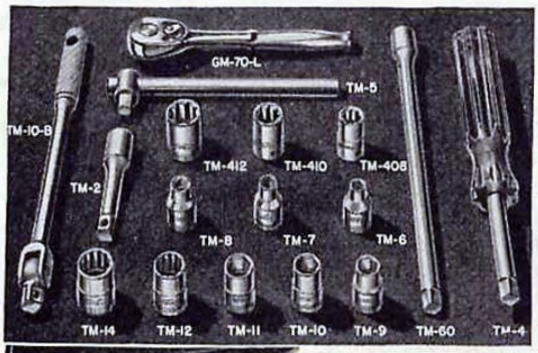
For the security of your Midget Set and added convenience in handling these tiny tools we have designed this exceptionally fine metal HOLD-ALL . . . small enough to give you tool selection at a glance—large enough to hold many other small tools or precision instruments. Utilizing a patented Slide-Tray principle, this case provides extreme utility and convenience. The top tray slides back on its special carrier, exposing the contents of the lower compartment . . . no drawers to pull out—no trays to lift out. Its entire contents are visible and any tool easily seen and removed without fumbling around to find it. Ten separate walled sections keep units segregated. Two sturdy hinges . . . tumbler type lock . . . spot welded heavy gauge steel . . . deep red baked enamel finish. (For further description see page 47.)

TM-130 MIDGET UTILITY SET—Tools only.....

TM-130-B MIDGET UTILITY SET—Complete in K-65-R MIDGET HOLD-ALL .....



TM-130-B Midget Set in Midget HOLD-ALL



TM-120 Midget Set

Contains the 17 most needed Midget Socket Wrenches . . . a fine set of these tiny tools for any mechanic in any line of business where small nuts or bolts have to be turned. You will find this set to be just what you need for making adjustments.

Contains Reversible Ratchet, Sliding Tee, Transparent Plastic Handle for electrical work, 2 Extension Bars, Nut Spinner, 8 sizes of Hex Sockets 3/16" to 7/16", and 3 Square Sockets ¼", 5/16" and 3/8".

TM-120 MIDGET SET—Complete in No. 55-BA Grey Enameled Metal Case.....

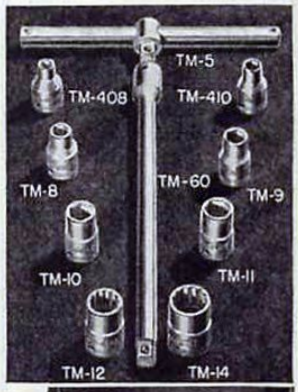


TM-120 Midget Set

TM-110 Midget Set

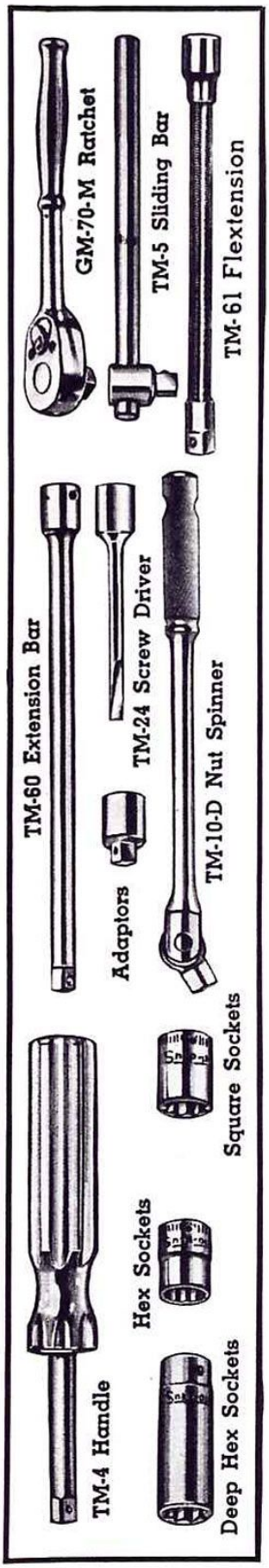
For the mechanic who wishes to start with the strictly necessary items and gradually build up his "MIDGET" tool equipment. Contains a Sliding Tee and Offset Handle, 2 Square and the 6 most needed sizes of Hex Sockets. A good basic foundation upon which to build up a complete Midget Kit.

TM-110 MIDGET SET—Complete in No. 22-B Grey Enameled Metal Case.....



TM-110 Midget Set

See pages 6, 7, 31, 33, 34, 38, 41, 81 for complete description of all Midget Tools included in above sets.



MIDGET UNITS

¼" Square Drive

Midget Ratchet Wrench (Patent No. 1,854,513)

THE finest ratchet ever made in such a small size . . . it has the same forged pear-shaped head, round handle, and fashioned hand grip as the Ferret and Master Ratchets. It reverses by shifting the thumb lever. Gears have 20 teeth to allow working in 1/20 part of a circle . . . it can be used in very close places where it is difficult to use other handles.

Stock No.	Square Drive	Head Thickness	Overall Length	Price
GM-70-M	¼"	3/8"	4 27/64"	

Midget Sliding Tee

One of the most useful types of wrench handles . . . combines a tee handle with an offset handle —two handles in one. Sliding head can be used at any position on the handle . . . in close places the handle can be slid back and forth through the head to provide turning room without removing the tool from the job.

Stock No.	Square Drive	Head Depth	Handle Diam.	Handle Length	Price
TM-5	¼"	13/16"	5/16"	4 1/2"	

Midget Nut Spinner Handle (Pat. Nos. 2,196,297) 2,005,202)

A handle providing the utmost utility . . . head is held in a semi-flex condition by a hidden spring and can be used at any position from the handle. Combines a speeder handle for quicker nut-turning and an offset handle for bringing them up tight.

Stock No.	Square Drive	Head Diameter	Overall Length	Price
TM-10-D	¼"	9/16"	6"	

Midget Flextension

Useful on many jobs where small nuts must be turned in hard-to-get-at places. Made of the very best flexible cable. Handy for awkward jobs where a solid handle or extension bar cannot operate. Not intended for breaking tight nuts loose or similar tough jobs.

Stock No.	Square Drive	Shaft Diameter	Overall Length	Price
TM-61	9/32"	¼"	6"	

Midget Grip Handles

An extremely useful addition to any ¼" drive Midget Set . . . the shock-proof plastic handle provides proper insulation for assembly or service operations on small electrical jobs and the fluted shape gives a firm non-slip hand grip.

Stock No.	Square Drive	Shank Length	Overall Length	Price
TM-4	¼"	1 7/16"	5 3/16"	

Midget Extension Bars

Lengthen the reach of any Midget handles. Made in two popular sizes to provide the maximum convenience and utility for your Midget series of wrenches.

Stock No.	Square Drive	Shank		Price
		Diam.	Length	
TM-2	¼"	½"	2"	
TM-60	¼"	½"	6"	

Single Broached Hexagon Sockets

Thin, straight walls on all Midget sockets permit their use in very close working space . . . openings are broached with greatest accuracy to insure perfect fit on properly sized and unabused nut or bolt.

Standard Single Hexagon Sockets						For Bolt Sizes					Extra Deep Hex. Sockets				
Size of Openings in ins.	Hexagon Sockets		Outside Diameter		Overall L'gth	Regular Series		Light Series	Cap Scr's	Set Scr's	Size of Openings in ins.	Hexagon Sockets		Outside Diameter		Overall L'gth
	Stock No.	Price	Soc't End	Drive End		Unfinished Bolts	Nuts & Finished Bolts	Nuts & Cas'l Nuts				Stock No.	Price	Soc't End	Drive End	
3/16	TM-6		5/16"	1/2	7/8	....	....	....	....	....	3/16	STM-6		11/32"	1/2	2
7/32	TM-7		23/64"	1/2	7/8	....	....	....	....	....	7/32	STM-7		21/64"	1/2	1 7/8
1/4	TM-8		25/64"	1/2	7/8	....	....	....	....	1/4	1/4	STM-8		25/64"	1/2	2
9/32	TM-9		7/16"	1/2	7/8	....	....	....	....	....	9/32	STM-9		7/16"	1/2	2
5/16	TM-10		31/64"	1/2	7/8	....	....	....	....	5/16	5/16	STM-10		31/64"	1/2	2
11/32	TM-11		1/2"	1/2	7/8	....	....	....	....	....	11/32	STM-11		1/2"	1/2	2
3/8	TM-12		35/64"	9/16	7/8	1/4	....	....	....	3/8	3/8	STM-12		35/64"	9/16	2
7/16	TM-14		5/8"	5/8	7/8	....	1/4	1/4	1/4	7/16	7/16	STM-14		5/8"	5/8	2

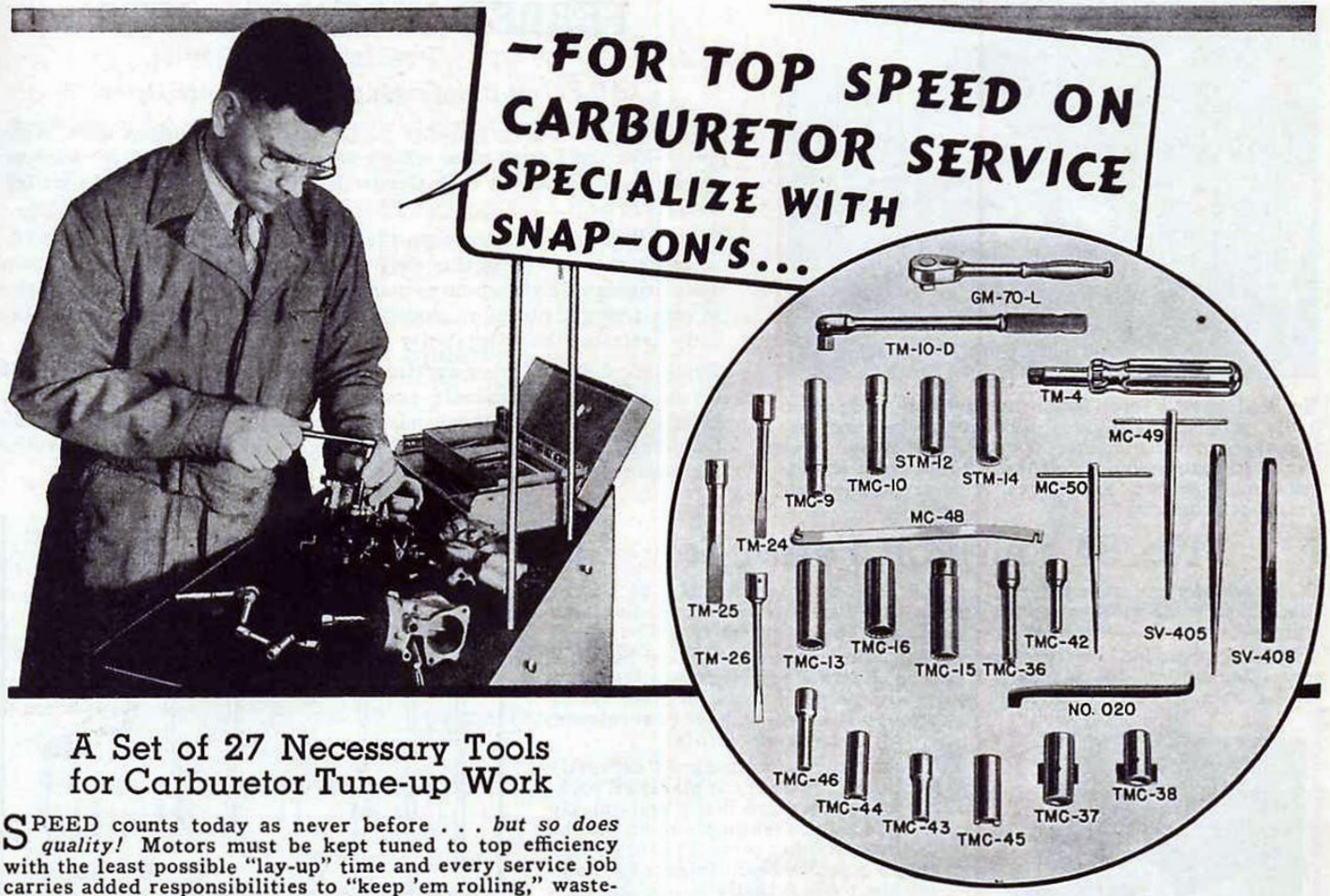
Double Broached Square Sockets

Size of Openings in Ins.	Double Square Sockets		Outside Diameter		Overall Length
	Stock No.	Price	Socket End	Drive End	
1/4	TM-408		31/64"	1/2"	7/8"
5/16	TM-410		9/16"	9/16"	7/8"
3/8	TM-412		21/32"	21/32"	7/8"

Midget Adaptors

Useful additional units which permit you to interchange ¼" and 9/32" square drive units. Increases the practical uses to which you can adapt your tools.

Stock No.	Handle End	Drive End	Outside Diam.	Overall Length	Price
A-6	9/32"	¼"	½"	15/16"	
A-8	¼"	9/32"	½"	15/16"	
TM-1	5/16"	¼"	5/8"	15/16"	
TA-3	½"	3/8"	½"	1 1/16"	



A Set of 27 Necessary Tools for Carburetor Tune-up Work

SPEED counts today as never before . . . *but so does quality!* Motors must be kept tuned to top efficiency with the least possible "lay-up" time and every service job carries added responsibilities to "keep 'em rolling," wastelessly . . . for thousands of additional miles.
That's why specialists in carburetion repair and adjusting have acclaimed Snap-on's special carburetor repair set . . . they know that tools specifically designed for the job make a definite, measurable difference in servicing time and in results.

TMC-100-B CARBURETION SERVICE SET

Mechanics who own this set say it's "just the ticket," for it's got all the essential tools you must have to handle everyday carburetor tune-up work . . . every tool a genuine Snap-on, designed to do its job quicker and better than any other tool you could use for the purpose. The TMC-100-B Set contains all the tools listed and shown in the illustration, and comes in the K-65-R Midget Hold-All . . . a small metal tool box that combines *the finest construction features with pleasing appearance.* A patented slide traveller carries the top tray back, exposing the lower compartment and its contents. Ten walled sections keep tools segregated and easy to locate. This spot-welded heavy guage steel case has two strong hinges, a tumbler type lock, and is finished in a rich red enamel. (See page 47.)

TMC-100-B—CARBURETION SET. Complete in K-65-R Midget Hold-All .....

Other Tools Suitable for Carburetor Service

For other tools suitable for carburetor service see the motor tune-up set on page 81 and small wrenches and tools on pages 6, 24, 26, 31, 34, 37, 38, and 39.

Screw Driver Attachments

Stock No.	Blade Width	Blade Thickness	Outside Diameter	Overall Length	Price
★TM-24	1/4"	.032"	1/2"	3 1/4"	
★TM-25	3/8"	.042"	1/2"	3 1/4"	
★TM-26	3/16"	.032"	1/2"	3 1/4"	

Deep Hexagon Carburetor Sockets

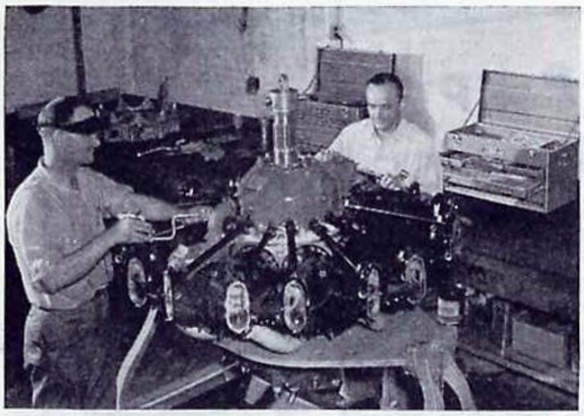
Stock No.	Size of Opening	Outside Diameter: Socket End	Outside Diameter: Drive End	Overall Length	Price
TMC-9	9/32"	13/32"	1/2"	2 5/8"	
TMC-10	5/16"	27/64"	1/2"	2 1/4"	
TMC-13	13/32"	9/16"	9/16"	2"	
TMC-16	1/2"	43/64"	41/64"	1 3/4"	
STM-12	3/8"	33/64"	9/16"	2"	
STM-14	7/16"	5/8"	5/8"	2"	

Pronged Carburetor Sockets

Stock No.	Size of Prong	Inside Diameter	Outside Diameter	Overall Length	Price
★TMC-43	.052"x1/16"	1/4"	3/8"	1 1/2"	
★TMC-44	1/16"x.052"	9/32"	1/2"	1 1/2"	
★TMC-45	5/64"x.087"	5/16"	5/8"	1 1/2"	

Special Carburetor Tools

TMC-15—15/32" Special Deep Hex Socket, for turning check valve in Stromberg carburetors. This is not a standard tool and is not intended for general work. Each.....
★TMC-36—Special Socket for Chandler-Grove carburetor jets . . . two prongs engage the slots in jet while a pilot centers the tool. Each...
TMC-37—Screw Driver for Type "D" Stromberg piston sleeve. Each .....
TMC-38—Screw Driver for Stromberg main discharge jet. Each....
TMC-42—Oval Socket for Stromberg jet on 1933-34 Fords. Each....
TM-4—Midget Spinner Handle. Each.....
TMC-46—Oval Socket for Stromberg jet, all cars except Ford. Each
MC-48—Economizer Valve Wrench. Each.....
★MC-49—Large Jet Puller, 4 1/4" long. Each.....
★MC-50—Small Jet Puller, 4 1/4" long. Each.....
TM-10-D—Midget Nut Spinner (see page 6). Each.....
GM-70-L—Midget Ratchet (see page 6). Each.....
★SVP-405—Starter Pin Punch, 3 3/4" long, 1/16" point. Each.....
★SVP-408—Flat Cold Chisel, 4 1/8" long, 5/16" edge. Each.....
★No. 020—Offset Screw Driver, 4" long, 1/4" edge. Each.....



So well have Ferret Wrenches and other Snap-on tools proved themselves throughout aviation assembly and maintenance operations that we have received letters endorsing these tools from important maintenance executives in every major air transport company.

FERRET WRENCH SETS

Trade name "Ferret" Reg. U. S. Patent Office

All Ferret Units made with 3/8" Square Drive

USED—*like the Ferret—for going in after the hidden ones.* Also —like the Ferret after which they are named, they are *twice as strong* as you'd expect such slender handles and shallow, thin-walled sockets to be.

Ferret Wrenches *squeeze into the closest places* and get those hard-to-reach nuts and bolts that defy the ordinary type of wrench. They were originated by Snap-on to make *quick, easy work* on the many jobs in very cramped places on modern day cars . . . The name "Ferret" exactly describes the adaptability and efficiency of these tools.

Being good at rendering service takes tools—good tools—and a tool kit large enough to handle every problem you are likely to meet. That's why so many thousands of mechanics have standardized on Snap-ons . . . they've learned that pennies saved to put into genuine Snap-on tools come back in dollars of greater earning power.

No. 84 Snap-on Ferret Set

You've really got something when you open up your new No. 84 Ferret Set . . . it's the most complete Ferret Set that you could buy. Contains thirty-eight units—the most popular in the entire Ferret series.

Handle equipment is very complete, including, as it does, every possible type. Sockets include Standard Hexagon, Extra Deep Hexagon, Hexagon Flexockets, and Square Sockets. Within its range of sizes, no other set of wrenches can equal it for *convenience, speed,* and *general utility.*



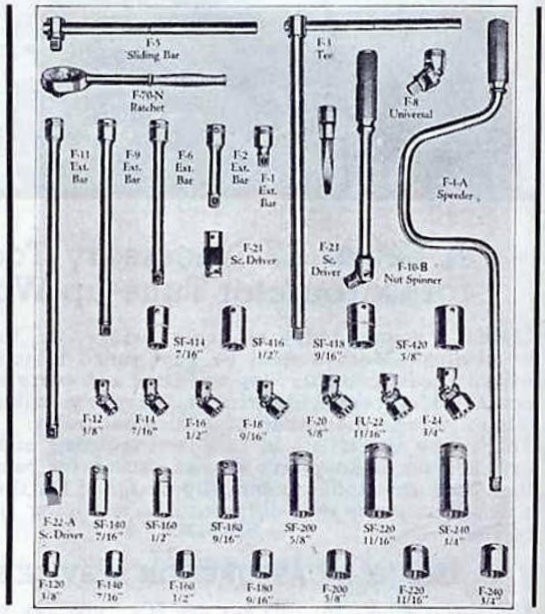
No. 84 Set

The metal case is designed expressly for the No. 84 Set . . . it places all sockets where they are easily and quickly located and leaves ample room for the addition of other tools. The handy tool tray is a decided convenience for holding the tools actually in use and adds much to the value of the set.

NO. 84—FERRET SET. Tools only .....

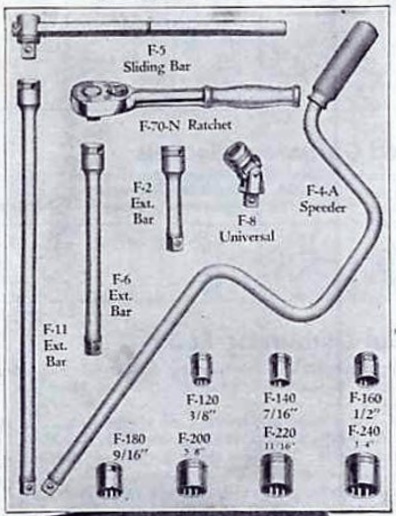
NO. 84-B—FERRET SET. Complete in FB-50 Metal Case .....

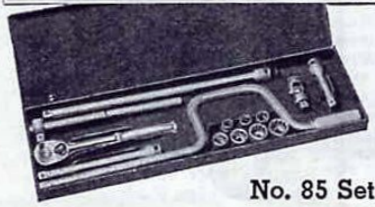
FB-50—Metal Case only. Each.



No. 84 Ferret Set Contains 38 Units

No. 85 Snap-on Ferret Set





No. 85 Set

Records prove this to be one of the most popular sets we have ever developed. Long a *favorite with mechanics* in all types of industry, this particular selection of Ferret Wrenches comprises the units that every practical mechanic requires in everyday work.

Automotive, air-conditioning, oil burner, refrigeration, aeronautical mechanics, and, in fact, mechanics everywhere have given this set their hearty endorsement . . . put it to work for you and see how much easier it makes those awkward, hard-to-reach jobs. Build up a *"Matched Unit"* kit of Snap-on Ferret Wrenches.

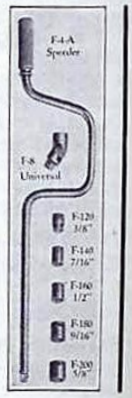
NO. 85—FERRET SET. Tools only .....

NO. 85-B—FERRET SET. Complete in No. 80-B Flat Metal Case .....

No. 83 Ferret Speed-Flex Set

A selection of Ferret units that will handle a large percentage of jobs around the motor, transmission, etc., and recommended for the mechanic who wishes to start his Ferret outfit with a minimum of expense. It provides a good foundation upon which to build, and he can add other Ferret units as the need or opportunity to buy them presents itself.

NO. 83—SPEED-FLEX SET. Tools only ...



No. 83 Set

See pages 9-10-11 for complete list of Ferret (3/8" square drive units).

FERRET HANDLES

All Ferret Units Made with 3/8" Square Drive

Ferret Reversible Ratchet (Pat. No. 1,854,513)

BUILT for performance as well as appearance, these fine tools have many hidden qualities which give you the years of trouble-free service under all kinds of working conditions for which Snap-ons are famous. *Hardened bearings* inserted in the head, together with *surface carburized steel base plates*, prevent wear due to continuous operation of the gear. The use of special alloy steels and *controlled grain refining heat treatments* for such parts as gears and pawls, together with extraordinary care in the machining of these parts, insures a free working action at all times and strength to stand up to the toughest type of nut-turning.

Stock No.	Square Drive	Head Thickness	Overall Length	Price
F-70N	3/8"	9/16"	6 13/16"	

A smooth, pear-shaped head, round handle, comfortable sanded surface and fashioned grip, and highest quality chrome finish give it a handsome appearance you'll be proud of. In every way it is built to *outlast and outperform* any other comparative size ratchet wrench.

Ferret Speeders

Stock No.	Square Drive	Overall Length	Sweep Radius	Price
F-4D	3/8"	17 3/8"	3 1/4"	
F-4H	3/8"	24"	3 1/4"	
F-4G	3/8"	36"	3 1/4"	

For fast nut running it is impossible to beat a speeder type of handle. Comfortable swivel end grip makes them handy and efficient in operation. Completes nut running operations in record time.

Ferret Ratchet Adaptor

Your Ferret tool outfit is never complete until you have added this popular new item . . . it is an exclusive Snap-on development and one that thousands of mechanics have hailed as the most useful new tool designed in years. It converts any combination of handle, extension, and socket into a reverse action ratcheting tool . . . a time saver in many operations where a standard ratchet is inconvenient to use. Exceptionally useful for work with 3/8" square drive Torqometers. (See page 62.)

Stock No.	Square Drive	Outside Diameter	Overall Length	Price
F-67	3/8"	1 1/8"	1 5/8"	

Ferret Extension Bars

Stock No.	Square Drive	Shank Length	Price
F-1	3/8"	1 1/2"	
F-2	3/8"	3"	
F-6	3/8"	6"	
F-9	3/8"	8"	
F-11	3/8"	12"	
FX-20	3/8"	20"	

Lengthen the reach of any Ferret Handles. Made in six lengths to provide the utmost flexibility of use for your Ferret Set. No outfit can be considered completely efficient without these useful units. The advantage of having just the right-length extension bar often means getting the job done quicker and with less effort.

Pat. Nos. 2,196,297 and 2,005,202 Ferret Nut Spinner

Stock No.	Square Drive	Head Diameter	Overall Length	Price
F-10H	3/8"	13/16"	9 1/2"	

Plenty of leverage for pulling nuts up tight or for breaking them loose . . . the swivel head swings to any angle from the handle and is held in a semi-flex condition at any position by means of an inner spring.

Ferret Speed Tees

Stock No.	Square Drive	Shank Diam.	Shank Length	Handle Length	Price
F-3	3/8"	1/2"	12"	6 1/2"	

An indispensable tool where extra clearance is needed . . . valuable for airplane service work, etc. Shaft can be used at any position on the bar. Spring backed ball and the grooved bar hold the shaft securely when in center position.

Ferret Sliding Tee

Stock No.	Square Drive	Handle Diam.	Handle Length	Head Depth	Price
F-5C	3/8"	13/32"	8"	1 3/16"	

Head slides freely to any position on the bar handle . . . when centered a spring and ball contact the groove in the handle to hold the tool in a semi-rigid condition. Can be used as a tee or an offset handle.

Ferret Flextension

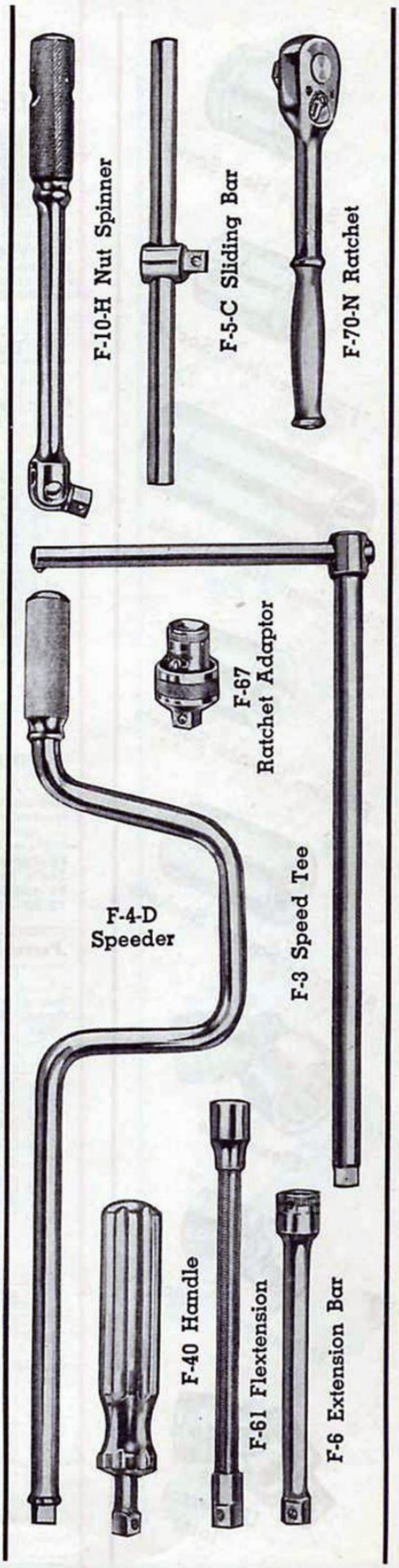
Stock No.	Square Drive	Shaft Diameter	Overall Length	Price
★F-61	3/8"	3/8"	8"	

Acts as a flexible drive between wrench handle and socket and provides an easy method of turning nuts in awkward positions . . . works around corners and over obstructions. The tool consists of a flexible steel cable with live rubber center shaft fitted securely to male and female square drive socket ends. Not intended for breaking nuts loose or similar tough jobs.

Ferret Grip Handle

Stock No.	Square Drive	Outside Diameter	Overall Length	Price
F-40	3/8"	1"	5 1/2"	

Make your Ferret Set more useful with the addition of this shockproof plastic handle. Ideal for electrical work and jobs where regular handle equipment is not suitable.



For Twenty-five Years the Standard of Highest Quality



F-Series Hex Sockets



FS-Series Hex Sockets



SF-Series Hex Sockets



F-Series Square Sockets



SF-Series Square Sockets



Flexockets



F-80 Universal Joint



F-8 Universal Joint

FERRET SOCKETS

All Ferret Units Made with 3/8" Square Drive

Double Hexagon Sockets



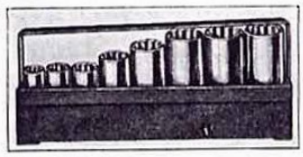
Double broached, *thin-walled sha'low sockets* . . . designed for easy work in hard-to-reach places.

F-1900—FERRET SOCKET SET. Consisting of one each of the sockets listed below, except F-080, F-100 and F-150, complete in No. 19-B Metal Case.....

Extra Deep Double Hexagon

Straight, thin-walled, double broached hexagon sockets that can be used to very great advantage on running board channels, body and fender support bolts, and many other jobs.

SF-800 — FERRET DEEP SOCKET SET. Containing one each of the sockets listed below, except SF-190, in SF-8B Tray .....



Double Hexagon Sockets						Regular Series		Light Series			Extra Deep Double Hexagon Sockets				
Size of Openings in ins.	Stock No.	Price	Outside Diameter: Socket End	Outside Diameter: Drive End	Overall L'gth	Unfinished Bolts	Nuts & Finished Bolts	Nuts & Cas'l Nuts	Cap Scr's	Set Scr's	Size of Openings in ins.	Stock No.	Price	Outside Diameter: Socket End	Outside Diameter: Drive End	Overall L'gth
1/4	F-080		3/8	21/32	29/32	....	....	....	....	1/4	.....	.....		.....	.....	....
5/16	F-100		15/32	21/32	29/32	....	....	....	....	5/16	.....	.....		.....	.....	....
3/8	F-120		9/16	21/32	29/32	1/4	....	....	....	3/8	3/8	SF-120		9/16	21/32	1 3/4
7/16	F-140		41/64	21/32	29/32	....	1/4	1/4	1/4	7/16	7/16	SF-140		41/64	21/32	1 3/4
15/32	F-150		21/32	5/8	29/32	....	....	....	....	....	.....	.....		23/32	.....	....
1/2	F-160		23/32	21/32	29/32	5/16	....	5/16	5/16	1/2	1/2	SF-160		25/32	21/32	1 3/4
17/32	F-170		3/4	3/4	29/32	....	....	....	....	....	.....	.....		13/16	.....	....
9/16	F-180		25/32	47/64	29/32	3/8	5/16	3/8	3/8	9/16	9/16	SF-180		7/8	23/32	2
19/32	F-190		13/16	25/32	15/16	....	....	....	....	....	19/32	SF-190		15/16	25/32	2 1/4
5/8	F-200		7/8	25/32	15/16	7/16	3/8	7/16	7/16	5/8	5/8	SF-200		1	7/8	2 1/4
11/16	F-220		15/16	15/16	1	....	....	....	....	....	11/16	SF-220		1 1/16	15/16	2 1/2
3/4	F-240		1	1	1	1/2	7/16	1/2	1/2	3/4	3/4	SF-240			31/32	2 1/2
.....	.....	.....	.....	.....	.....	....	1/2	....	9/16	....	13/16	SF-260			1 1/16	2 1/2

Double Hexagon Flexockets

Trade Mark—Patent No. 2,196,297

Extremely small overall measurements . . . *hidden tension spring* holds the socket at any desired angle for application to the job . . . works freely at any angle and saves time on many a hard-to-reach job.

FF-700—Seven sizes of Flexockets listed below. Tools only .....

FF-700B—Above set in 22-BF metal box.....

22-BF—Metal case only.....

Single Hexagon Sockets

Certain types of nuts, cap screws, etc., are found to be made considerably undersize, and it is absolutely necessary to use a six-point socket to eliminate slippage. These sockets are accurately broached to fit properly sized nuts, but being single hexagon will also work efficiently on undersized nuts and bolts . . . also recommended for turning Parker-Kalon and other self-tapping screws.

Ferret Double Hexagon Flexockets						Regular Series		Light Series			Single Hexagon Sockets				
Size of Openings in Ins.	Stock No.	Price	Outside Diameter: Socket End	Outside Diameter: Drive End	Overall L'gth	Unfinished Bolts	Nuts & Finished Bolts	Nuts & Cas'l Nuts	Cap Scr's	Set Scr's	Size of Openings in Ins.	Stock No.	Price	Outside Diameter: Socket End	Outside Diameter: Drive End	Overall L'gth
3/8	F-12		17/32	21/32	1 33/64	1/4	....	....	....	3/8	3/8	FS-120		17/32	21/32	1 33/64
7/16	F-14		39/64	21/32	1 33/64	....	1/4	1/4	1/4	7/16	7/16	FS-140		39/64	21/32	1 33/64
1/2	F-16		23/32	21/32	1 9/16	5/16	....	5/16	5/16	1/2	1/2	FS-160		23/32	21/32	1 9/16
9/16	F-18		25/32	11/16	1 19/32	3/8	5/16	3/8	3/8	9/16	9/16	FS-180		25/32	11/16	1 19/32
5/8	F-20		55/64	11/16	1 11/16	7/16	3/8	7/16	7/16	5/8	5/8	FS-200		55/64	11/16	1 11/16
11/16	FU-22		15/16	3/4	1 13/16	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
3/4	F-24		1	3/4	1 27/32	1/2	7/16	1/2	1/2	3/4	.....	.....	.....	.....	.....	.....

Ferret Square Sockets

Standard Double Square						Regular Series		Light Series			Extra Deep Double Square				
Size of Openings in ins.	Stock No.	Price	Outside Diameter: Socket End	Outside Diameter: Drive End	Overall L'gth	Unfinished Bolts	Nuts & Finished Bolts	Nuts & Cas'l Nuts	Cap Scr's	Set Scr's	Size of Openings in ins.	Stock No.	Price	Outside Diameter: Socket End	Outside Diameter: Drive End	Overall L'gth
1/4	F-408		31/64	5/8	27/32	....	....	....	....	1/4	.....	.....	.....	.....	.....	.....
5/16	F-410		9/16	5/8	27/32	....	....	....	....	5/16	.....	.....	.....	.....	.....	.....
3/8	F-412		21/32	11/16	15/16	1/4	....	....	....	3/8	.....	.....	.....	.....	.....	.....
7/16	F-414		25/32	3/4	1	....	1/4	1/4	1/4	7/16	7/16	SF-414		49/64	13/16	1 1/2
1/2	F-416		7/8	7/8	1	5/16	....	5/16	5/16	1/2	1/2	SF-416		7/8	7/8	1 1/2
.....	.....	.....	.....	.....	.....	3/8	5/16	3/8	3/8	9/16	9/16	SF-418		1	1	1 1/2
.....	.....	.....	.....	.....	.....	7/16	3/8	7/16	7/16	5/8	5/8	SF-420		1 1/16	1 1/16	1 1/2

FERRET SOCKET ATTACHMENTS

All Ferret Units made with 3/8" Square Drive

Ferret Universal Joint

Illustrated on page 10 Patent No. 2,196,297

Saves a lot of tough work fumbling after those awkward-to-get-at studs and bolts. Tension spring holds tool in a semi-flex state for easy application to the job.

Stock No.	Square Drive	Outside Diam.	Overall Length	Price
F-8	3/8"	3/4"	1 59/64"	
F-80	3/8"	5/8"	1 31/64"	

Ferret Adaptors

Enables you to interchange your Ferret Wrenches with Midget 9/32" and Master 1/2" drive units.

Stock No.	Handle End	Drive End	Outside Diameter	Overall Length	Price
M-1	3/8"	9/32"	5/8"	1 1/16"	
A-2	3/8"	1/2"	21/32"	1 3/8"	
A-3	9/32"	3/8"	1/2"	29/32"	
A-4	1/2"	3/8"	7/8"	1 9/32"	

Weatherhead Sockets

Designed expressly to simplify removing and replacing Weatherhead copper fittings without damaging these soft metal parts.

Stock No.	Square Drive	Fitting Size	Price
FD-6	3/8"	3/16"	
FD-8	3/8"	1/4"	
FD-10	3/8"	5/16"	

Drag Link Adjuster

Screw Driver type socket for tightening slotted nuts on steering gear assembly, shock absorbers, etc.

Stock No.	Blade Width	Blade Thickness	Outside Diameter	Overall Length	Price
F-22A	11/16"	.116	11/16"	1 1/4"	

Screw Driver Socket

For Chevrolet pan screws . . . protecting spring action collar prevents slipping. F-21 for 1939 and earlier models. F-21-N for 1940 and 1941.

Stock No.	Blade Width	Blade Thickness	Overall Length	Price
★F-21	7/16"	.050	1 21/32"	
★F-21-N	9/16"	.050	1 21/32"	

Phillips Bit Screw Drivers

These units are now made with detachable bits, making it possible to give the driving bit a different heat treatment and hardness than the socket part. This makes a stronger, longer lasting tool, at the same time making it possible to replace quickly and inexpensively any bit that does suffer breakage. See pages 35 and 36 for other Phillips Screw Drivers.

	Complete Tool				Socket Only		Bit Only		
Phillips Bit Size	Stock No.	Square Drive	Overall Length	Price	Stock No.	Price	Stock No.	Length	Price
3	FP-32	3/8"	2 3/8"		FP-32-1	(S)	★FP-32-2	1 5/8"	
4	FP-42	3/8"	2 3/8"		FP-42-1	(S)	★FP-42-2	1 5/8"	
4	FP-43	3/8"	3 1/2"		FP-43-1	(S)	★FP-43-2	2 3/4"	
4	FP-46	3/8"	6"		FP-46-1	(S)	★FP-46-2	5 1/4"	

No. 5-40—Allen Head Set Screw for all above tools. Each.....

Clutch-type Screw Driver

A Ferret socket driver to handle clutch-type screws, sometimes referred to as "butterfly" or "figure-8" screws. This screw driver attachment is built short for easy operation in close quarters and fits any 3/8" drive handle.

Stock No.	Square Drive	Bit Diameter	Overall Length	Price
★F-29	3/8"	.406"	1 3/4"	
★F-30	3/8"	.300"	1 3/4"	

Pipe Plug Socket

This 9/32" single square socket for 3/8" drive handles is designed for the 1/8" pipe plugs used on many modern cars. Most of these plugs are fairly inaccessible unless a socket wrench is used. Not illustrated.

Stock No.	Size of Opening	Square Drive	Overall Length	Price
PP-409	9/32"	3/8"	7/8"	

Allen Head Screw Drivers

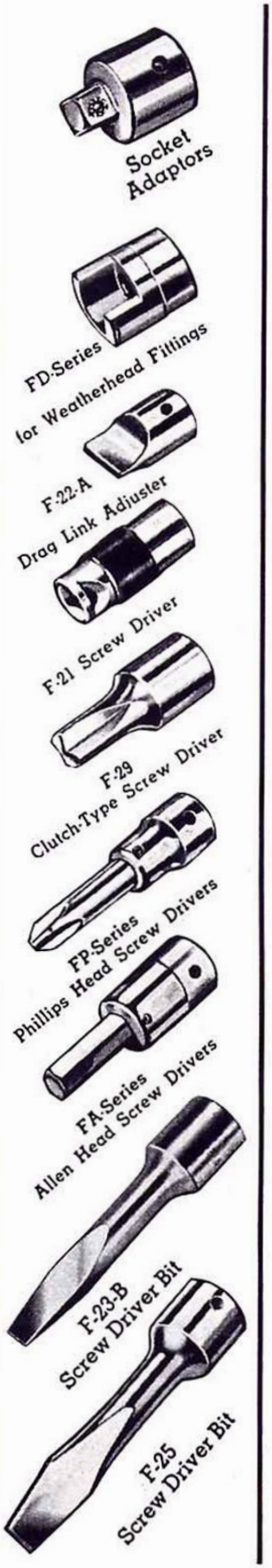
A new socket type wrench for Allen Head Screws . . . replaceable bits eliminate trouble found in other types of drivers. This driver is far stronger, for each part is individually heat treated to bring out its full strength and to prevent weaknesses between shank and butt. Now if you break a bit, it can be replaced quickly and cheaply. Standard tools furnished with short bits.

Complete Standard Tool					Extra Bits					
Wrench Size	Stock No.	Square Drive	Overall Length	Price	Stock No.	Short Bits Size	Price	Stock No.	Long Bits Size	Price
1/4"	FA-8	3/8"	2"		★FA-8-2	1/4"x1 1/4"		★FA-8-3	1/4"x3"	
5/16"	FA-10	3/8"	2 1/16"		★FA-10-2	5/16"x1 1/4"		★FA-10-3	5/16"x3"	
3/8"	FA-12	3/8"	2 1/16"		★FA-12-2	3/8"x1 1/4"		★FA-12-3	3/8"x3"	

Ferret Screw Driver Blades

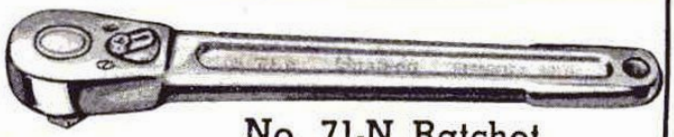
Stock No.	Blade Tip Thickness	Blade Width	Overall Length	Price
★F-23-B	1/32"	1/4"	3"	
★F-25	1/16"	11/32"	3 7/16"	

Useful Screw Driver Blade attachments which can be used with any Ferret 3/8" square drive handle . . . useful many times when a standard screw driver does not quite fill the bill.

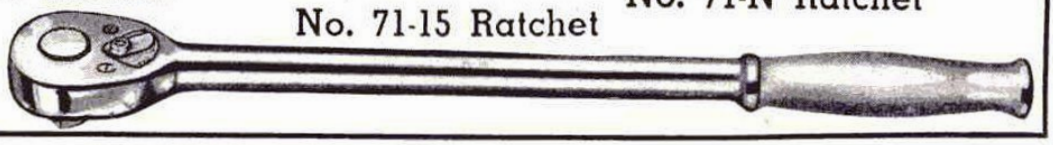




No. 71-10 Ratchet



No. 71-N Ratchet



No. 71-15 Ratchet



Nut Spinner Handles



No. 67-A Ratchet Adaptor



Extension Bars



No. 8 Universal Joint



All Master Units Made With ½" Square Drive

Master Ratchet Wrenches (Patent No. 1,854,513)

Snap-on offers you the choice of *three types of Master Ratchet Wrench* . . . each has the same head and mechanism that has proved its unbeatable design and construction through several years of professional use and abuse. Ratcheting and reverse actions work freely at all times . . . an oiler plug is fitted for occasionally oiling the moving parts with a good grade of machine oil.

The convenience of the reverse action must be experienced to be properly appreciated . . . no push-thru plugs to bother with . . . no stopping to change sockets from one side to the other . . . the tool does not leave the nut till the operation is completed. All working parts are accurately machined, heat treated, and finished—*Everything is done to make these ratchets the outstanding tools of their kind.*

Stock No.	Square Drive	Head Thickness	Overall Length	Price
71-N	½"	¾"	9 21/32"	
71-15	½"	¾"	15"	
71-10	½"	¾"	9 13/16"	

Extension Bars

Every set should have a complete assortment of extension bars . . . they give you that extra amount of reach that often means the difference between a tough job and an easy job.

Stock No.	Square Drive	Shank Length	Price
S-2	½"	2"	
S-3	½"	3½"	
S-6	½"	5"	
S-12	½"	10"	
S-20	½"	20"	
S-24	½"	24"	
S-30	½"	30"	

Ratchet Adaptor

NEW . . . Here is a brand new addition to the Master series of Snap-on Wrenches . . . a ratcheting adaptor that converts any combination of handle, extension and socket into a ratcheting tool. Can be used with the Snap-on Torqometer (page 62) for convenience on cylinder head work. If you want to make your set twice as useful, add this new tool to it.

Stock No.	Square Drive	Outside Diameter	Overall Length	Price
67-A	½"	1 5/8"	2 9/16"	

Nut Spinner Handles

Break them loose—Spin them off . . . with a Nut Spinner Handle.

The hinged socket receiving end allows you to work the tool in any position to clear obstructions and is fitted with an inner spring device that holds the head semi-rigid at any angle for easy placement on the job. Long handles give plenty of leverage for pulling nuts up tight or breaking them loose.

Snap-on NUT SPINNERS TRADE-MARK
Pat. No. 2,196,297
Pat. No. 2,005,202

Straighten out the hinge and you have a speeder for spinning them on or off. A hole is drilled through the knurled handle grip for use with a bar, and on NS-18 and NS-15 the handle is broached on the end with a ½" square to receive offset, sliding tee, or ratchet handles. Bars are not included with these tools.

Stock No.	Square Drive	Head Diameter	Overall Length	Price
NS-18	½"	1 1/16"	18"	
NS-15	½"	1 1/16"	15"	
NS-11	½"	1 1/16"	12"	

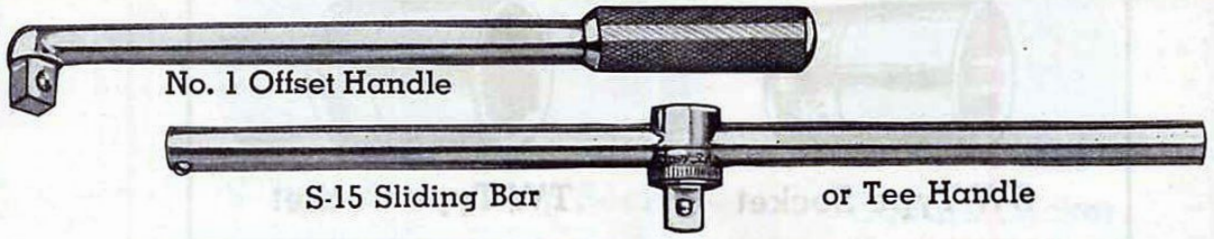


The NS-18 Nut Spinner Handle and a deep socket was found just right for easy work on this front end.

Universal Joint for Master Handles Patent No. 2,196,297

Now fitted with exclusive spring device which will hold the joint at any angle for easy application to the job, but which does not interfere with the swivel action of the tool in use. Built for a lifetime of service.

Stock No.	Square Drive	Outside Diameter	Overall Length	Price
8	½"	15/16"	2 21/32"	



All Master Units made with ½" Square Drive

MASTER WRENCH HANDLES

YOU'LL say these wrench handles are "custom-built" to fit your job . . . no matter what the nut-turning operation may be—one's as easy as the other when you use the proper handle and socket combination.

Snap-on Wrenches *look right* and *"feel" right* because they are *designed right* and *built right* . . . they have proved their superior qualities in thousands of repair shops . . . they are tools you can use with profit and display with pride. Try them out—see how they work, how balanced they feel . . . compare them with others you have used . . . treat yourself to greater working satisfaction with Snap-on Wrenches.

Offset Handle

The compact drive end reaches into many close places and simplifies many otherwise difficult jobs. Provides powerful leverage and great strength to break loose those extra tight nuts and bolts.

Stock No.	Square Drive	Head Diam.	Head Depth	Overall Length	Price
1	½"	⅝"	1 5/16"	11¼"	

Sliding Tee Handles

A friction ball in the head snaps into the center groove to make a practical Tee without preventing free action as a sliding bar. The head slides to end of bar to form an offset handle with the head flush with end of bar.

Stock Number	Square Drive	Head Depth	Handle		Price
			Length	Diam.	
S-10	½"	1¾"	10"	⅝"	
S-15	½"	1¾"	15"	⅝"	

Speeder Handles

A favorite with a great majority of mechanics . . . there's *nothing better or faster* to use where you have many nuts that must be serviced. Spins them on or off in a hurry. Both handle grips swivel for easy operation.

Stock No.	Shank Length	Overall Length	Sweep Radius	Price
K-4	8"	18¾"	4⅛"	

Nut Spinner Speeder

(Pat. Nos. 2,196,297 and 2,005,202)

A combination Speeder, Nut Spinner and Offset Handle in one tool. Straighten the hinged head to spin the nut down and, without taking it off the job, bend into offset position to pull it down tight. A big time saver for general use.

Stock No.	Square Drive	Sweep Radius	Shank Length	Overall Length	Price
NS-4C	½"	2¾"	6⅜"	16¼"	

Drag Link Adjusters

Tightening slotted nuts on steering gear assemblies, drag links and tie rods is made easy by using these adjuster sockets on a "Master" drive handle. The A-26 is designed especially for use on Model "A" Ford and Houdaille Shock Absorbers.

Stock No.	Square Drive	Blade		Overall Length	Price
		Width	Thickness		
A-15	½"	1 3/16"	.150	1 11/16"	
A-17	½"	15/16"	.150	1 19/32"	
A-26	½"	47/64"	.109	1 19/32"	

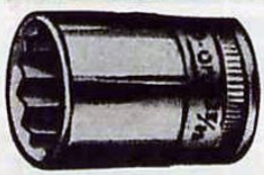
Handle and Socket Adaptors

These adaptors enable you to interchange Ferret ⅜" and Heavy Duty ¾" and ⅝" square drive units with your Master handles and sockets . . . they greatly increase the utility of your present equipment. It will pay you to add these sizes to your tool outfit.

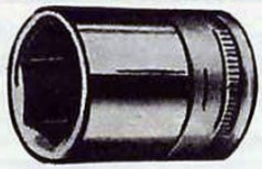
Stock No.	Handle End	Drive E d	Overall Length	Outside Diameter	Price
HD-1	½"	⅝"	1 5/8"	1"	
A-2	⅜"	½"	1 3/8"	21/32"	
A-4	½"	⅜"	1 9/32"	7/8"	
LA-12	½"	¾"	1 11/16"	1"	
LA-62	¾"	½"	1 13/16"	1 7/16"	



For Twenty-five Years the Standard of Highest Quality



SW-Type Socket



TW-Type Socket

MASTER SOCKETS

All Master Sockets Made with ½" Square Drive

If your life depended on SOCKETS . . . you'd check on the *steel* in those sockets, on the way they were broached, shaped, and hardened. Lives do depend on sockets . . . on the way nuts are tightened and adjusted. Every loose nut is a source of danger to car owners, a cause of "comebacks" to shop owners. Make sure *your* sockets are the best you can buy—for safety's sake—and for the greater service speed, skill, and the earning power good socket wrenches can bring you.

Snap-on sockets are famed for good alloy tool steel—processed and toughened to give you the greatest tensile strength without brittleness. They're *hardened all the way through* instead of merely on the surface . . . hot broached for clean-edged, non-slip grip, precision machined for accurate fit, finished for lasting serviceability.

Like the beautiful swords that shaped history, Snap-on sockets have shaped modern car service methods . . . for Snap-on originated the interchangeable socket wrench, and nothing has ever proved better than the famous "Snap-on" pressure ball for *fast, easy interchanging* of sockets and handles. *Easy on—easy off*—yet the handle opening is so correctly machined that no "play" is allowed when the socket is snapped on. *There is no comparison between the lasting qualities of a Snap-on and the ordinary makes of socket wrenches,* and it's a genuine "Snap-on" only if the name Snap-on is stamped on it.

Extra Thin, Straight-Walled Hexagon Sockets

Double Broached Series



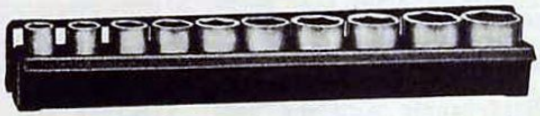
The extra thin, straight-walled, double hex socket was originated and first offered to the trade by Snap-on . . . today it is the first choice of a large majority of mechanics . . . it gets those tight nuts in recesses and close corners where no other wrench will work.

SW-1500—SET. All sizes except SW-120, SW-290, and SW-380½ in No. 15-B Tray.....

SW-1200—SET. SW-140 to SW-320½ inclusive with exception of SW-290 in No. 5-B Tray...

SW-1000—SET. SW-140 to SW-280 inclusive in No. 5-B Tray .....

Single Broached Series

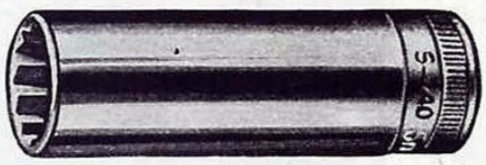


Many mechanics prefer a single broached type of socket and will find in this line of straight, thin-walled sockets just the tools they have been looking for. They are engineered throughout to give you long, satisfactory service under the toughest conditions.

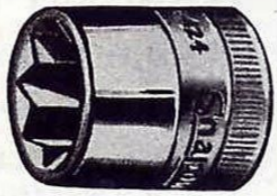
TW-900—SOCKET SET. Including one each of all sizes listed below except TW-320½, complete in No. 16-B Tray.....

Double Broached Series						For Bolt Sizes					Single Broached Series				
			Outside Diameter			Regular Series		Light Series					Outside Diameter		
Size of Openings in Inches	Stock No.	Price	Socket End	Drive End	Overall Length	Unfinished Bolts	Nuts & Finished Bolts	Nuts & Castle Nuts	Cap Screws	Set Screws	Size of Openings in Inches	Stock No.	Price	Socket End	Drive End	Overall Length
3/8	SW-120		37/64"	7/8	1 1/2	1/4				3/8						
7/16	SW-140		41/64"	7/8	1 1/2		1/4	1/4	1/4	7/16	7/16	TW-140		41/64"	7/8	1 1/2
1/2	SW-160		47/64"	7/8	1 1/2	5/16		5/16	5/16	1/2	1/2	TW-160		47/64"	7/8	1 1/2
9/16	SW-180		13/16"	7/8	1 1/2	3/8	5/16	3/8	3/8	9/16	9/16	TW-180		13/16"	7/8	1 1/2
19/32	SW-190		27/32"	7/8	1 1/2											
5/8	SW-200		57/64"	7/8	1 1/2	7/16	3/8	7/16	7/16	5/8	5/8	TW-200		57/64"	7/8	1 1/2
11/16	SW-220		31/32"	15/16	1 1/2						11/16	TW-220		31/32"	15/16	1 1/2
3/4	SW-240		1 1/32"	1	1 1/2	1/2	7/16	1/2	1/2	3/4	3/4	TW-240		1 1/32"	1	1 1/2
23/32	SW-250		1 1/16"	1 1/32	1 1/2											
13/16	SW-260		1 1/8"	1 3/32	1 1/2		1/2		9/16		13/16	TW-260		1 1/8"	1 3/32	1 1/2
7/8	SW-280		1 3/16"	1 3/32	1 1/2	9/16	9/16	9/16	5/8	7/8	7/8	TW-280		1 3/16"	1 5/32	1 1/2
*29/32	SW-290		1 1/4"	1 7/32	1 1/2											
15/16	SW-300½		1 1/4"	1 7/32	1 1/2	5/8		5/8			15/16	TW-300½		1 1/4"	1 7/32	1 1/2
1	SW-320½		1 5/16"	1 9/32	1 1/2		5/8		3/4	1	1	TW-320½		1 5/16"	1 9/32"	1 1/2"
1 1/16	SW-340½		1 7/16"	1 13/32	1 5/8			3/4								
1 1/8	SW-360½		1 1/2"	1 15/32	1 3/4	3/4	3/4		7/8	1 1/8						
1 3/16	SW-380½		1 5/8"	1 19/32	1 3/4											
1 1/4	SW-400½		1 11/16"	1 21/32	1 7/8			7/8		1 1/4						

*SW-290 is built extra heavy for shackle bolt work.



S-Type Extra Deep Socket



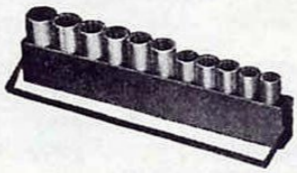
Square Socket

MASTER SOCKETS

All Master Sockets Made With ½" Square Drive

Extra Deep Hexagon Sockets

Size of Openings in inches	Extra Deep Double Hex. Stock No.	Price	Outside Diameter Socket End	Outside Diameter Drive End	Overall Length	For Bolt Sizes: Regular Series Unfinished Bolts	Regular Series Nuts & Finished Bolts	Light Series Nuts & Castle Nuts	Cap Screws	Set Screws
1/2	S-160		47/64"	57/64	3 1/4	5/16"		5/16"	5/16"	1/2"
9/16	S-180		13/16"	57/64	3 1/4	3/8"	5/16"	3/8"	3/8"	9/16"
5/8	S-200		51/64"	57/64	3 1/4	7/16"	3/8"	7/16"	7/16"	5/8"
11/16	S-220		15/16"	15/16	3 1/4					
3/4	S-240		1 1/32"	1 1/32	3 1/4	1/2"	7/16"	1/2"	1/2"	3/4"
13/16	S-260		1 1/16"	1 1/16	3 1/4		1/2"		9/16"	
7/8	S-280		1 3/16"	1 3/16	3 1/2	9/16"	9/16"	9/16"	5/8"	7/8"
15/16	S-300½		1 1/4"	1 1/4	3 1/2	5/8"		5/8"		
1	S-320½		1 5/16"	1 5/16	3 1/2		5/8"		3/4"	1"
1 1/16	S-340½		1 7/16"	1 7/16	3 1/2			3/4"		
1 1/8	S-360½		1 1/2"	1 1/2	3 1/2	3/4"	3/4"		7/8"	1 1/8"



Just the ticket where nuts are set down deeply over the bolts . . . good for spark plugs, spring "U" bolts, and many other jobs where they will save you time and trouble. Made in a complete range of sizes to take all nuts or bolts.

S-1100—DEEP SOCKET SET—contains all sizes listed in No. 11-B Case. . .

S-500—DEEP SOCKET SET—contains S-260, S-280, S-300½, S-320½, and S-360½ .....

Double Broached Square Sockets

For greater working convenience where handle movement is limited, these Snap-on square sockets all have double broached or 8-point openings. Snap-on sockets are machined from steels famous for toughness and durability . . . heat treated and tempered in electrically controlled furnaces for maximum strength and finished in lustrous chrome plate.

NO. 900—SQUARE SOCKET SET. 9 sizes including all those listed below except No. 426.....

Size of Openings in ins.	Double Sq. Sockets Stock No.	Price	Outside Diameter Socket End	Outside Diameter Drive End	Overall L'gth	Regular Series Unfinished Bolts	Regular Series Nuts & Finished Bolts	Light Series Nuts & Cas'l. Nuts	Cap Scr's	Set Scr's
3/8	412		43/64"	7/8	1 3/8	1/4"				3/8"
7/16	414		51/64"	15/16	1 3/8		1/4"	1/4"	1/4"	7/16"
1/2	416		7/8"	15/16	1 3/8	5/16"		5/16"	5/16"	1/2"
9/16	418		1 1/64"	1 1/8	1 3/8	3/8"	5/16"	3/8"	3/8"	9/16"
5/8	420		1 1/16"	1 1/8	1 3/8	7/16"	3/8"	7/16"	7/16"	5/8"
11/16	422		1 5/32"	1 1/4	1 3/8					
3/4	424		1 1/4"	1 5/16	1 1/2	1/2"	7/16"	1/2"	1/2"	3/4"
13/16	426		1 3/8"	1 7/16	1 5/8		1/2"		9/16"	
7/8	428		1 1/2"	1 9/16	1 5/8	9/16"	9/16"	9/16"	5/8"	7/8"
1	432		1 23/32"	1 3/4	1 3/4		5/8"		3/4"	1"

Stud Removers

½" *Square Drive*

A-50—⅜" to ½" Capacity

Develops a tremendous gripping power which prevents slipping. At the same time it will not lock on the job—releases as soon as pressure is released. In fact, the tool can be used with a ratcheting action if desired.

A-50—STUD REMOVER. ⅜" to ½" capacity. Complete with A-50-3A Rack.....
A-50-A—Housing. Each .....
A-50-B—Drive Gear. Each.....
A-50-3A—Gripping Rack. ⅜" to ½" capacity. Each .....
A-50-4A—Gripping Rack. ¼" to 5/16" capacity. Each .....

A-36—½" to ¾" Capacity

Driving shank extends through both sides of housing, providing a bearing each side of gripper and preventing the tool from binding. The knurled gripping wheel is made of special alloy steel which works satisfactorily on soft or hardened studs.

A-36—STUD REMOVER. ½" to ¾" capacity. Each .....
A-36-A—Housing only. Each .....
A-35-B—Shank .....
A-35-C—Roller .....



A-50
Stud Remover



Pat. No. 2,204,852
A-36
Stud Remover

MASTER WRENCH SETS

Trade Mark

With Extra Thin, Straight Walled Sockets

All Master Units Made with ½" Square Drive



BUILD your kit from the ground up . . . with Snap-on *"Matched Units"*—get rid of odds and ends of time-wasting, "misfit" tools . . . replace them . . . in complete sets or piece by piece . . . with Snap-on *matched unit* tools.

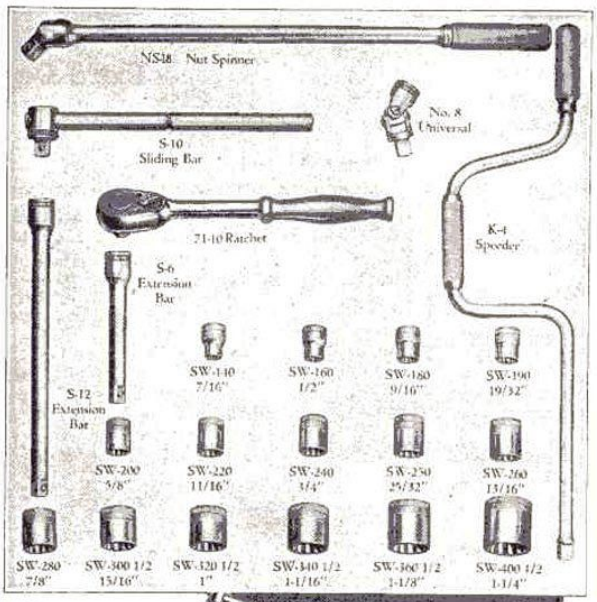
Treat yourself to *greater working ease* and *faster, time-saving* Snap-on wrenches. They are *fast, safe, husky, well balanced tools* . . . because they are precision engineered for absolute accuracy in size and fit.

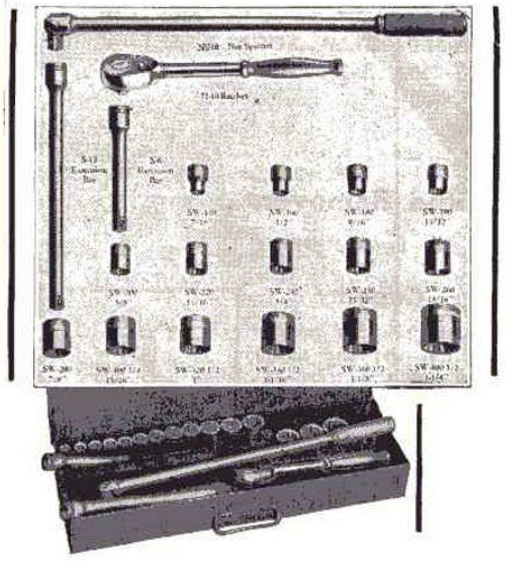
No. 47 Master Service Set

Trade Mark

Many thousands of mechanics have recognized the value of building their kits from a *good basic set foundation* such as the No. 47 Master Service Set . . . for here in one handy, economical set are the key tools for every service operation . . . the fundamental tools for assembling any complete outfit of *"Matched Units"*—for building yourself a *bigger future* in any service or repair business. It's right up to the minute in efficiency and a set of *"Matched Units"* any man would be proud to own.

NO. 47—MASTER SERVICE SET. Tools only.....
NO. 47-B—MASTER SERVICE SET. In K-80 Utility Case...
K-80—UTILITY CASE .....

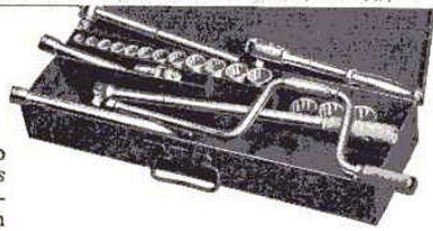




No. 47 Master Service Set Contains 22 Units Complete in Metal Box

No. 44 Set General Utility

Trade Mark



Here's a dandy set for the man who wants a *complete range of socket sizes plus efficient handle equipment at minimum cost* . . . one that will help him beat flat-rate and increase his earnings. For this man we sincerely recommend the No. 44 General Utility Set. The fifteen sockets range from 7/16" to 1¼". The Ratchet and the two Extension Bars provide handle movement in restricted places, and the NS-18 Nut Spinner gives a Spinner, an Offset, and a Semi-Flex Handle all in one. You can't beat this set for all round utility . . . it's a perfect start for a *"planned" tool outfit.*

NO. 44—GENERAL UTILITY SET. Tools only.....
NO. 44-B—GENERAL UTILITY SET. Complete in K-80 Utility Case.....
K-80—UTILITY CASE .....

Nut Spinner Sets

One of these Nut Spinner sets will do more work for its size—and make those close-corner jobs easier for you —than any other socket set you have ever seen.

You have your choice of three different length Nut Spinner Handles described on page 12 and the SW-1200 Set of straight, thin-walled, double hexagon sockets described on page 14. Sizes of sockets 7/16" to 1" inclusive. *There's a lot of wrench here at minimum cost.*

NS-2518—NUT SPINNER SET. With NS-18 Handle. Tools only.
NS-2515—NUT SPINNER SET. With NS-15 Handle. Tools only.
NS-2511—NUT SPINNER SET. With NS-11 Handle. Tools only.
NO. 40-B—METAL CASE. For above Sets.....

Snap-on NUT SPINNERS TRADE MARK



See pages 12, 13, 14 and 15 for complete list of Master (½" square drive) units.

HEAVY DUTY LOXOCKET SETS

Trade Mark (Lic. Reissue Pat. 19,287)

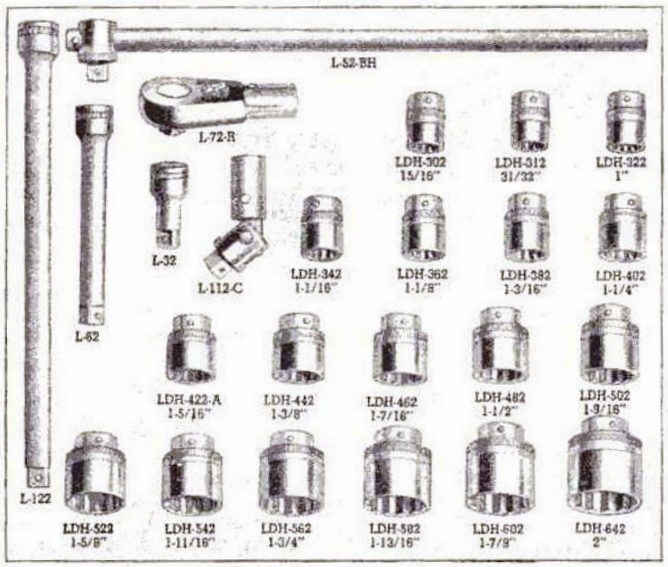
¾" Square Drive

For the Larger Nuts and Bolts

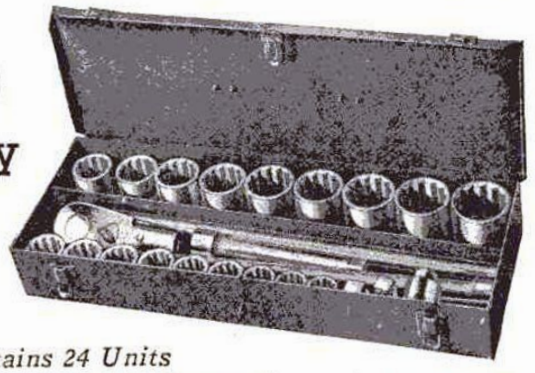
WHEN a tough nut ties up your shop, minutes lost add up to dollars lost . . . you lose money every minute *any* machine is laid up for repairs or servicing. The trick is to get them OUT . . . *quick*. It's no trick at all when your mechanics are equipped with Snap-on Heavy Duty Loxocket Wrenches . . . that's why so many Managers and Superintendents make sure that these tools are standard equipment in their shops. You get sixty *Full Minutes Work Value* out of every hour with a Snap-on Loxocket Set.



Loxockets cannot accidentally come apart. Slip them on and they automatically lock on—to release them, simply press the Thumb Button. Simple—*Convenient*—SAFE.



L-225 Heavy Duty Set



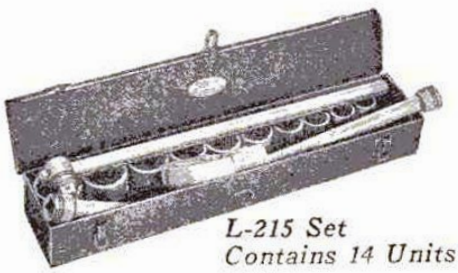
Contains 24 Units

A complete assortment of thoroughly practical handles and a full range of Loxocket sizes. The sturdy, straight-wall (high carbon alloy steel) Loxockets slip over nuts with a clean, snug fit that holds tight no matter how hard the pull. Because of precision engineering and accurate machining, there is no sloppy play to round off nut corners. *Quick . . . safe . . . efficient . . . dependable.* Set comes in a special metal case of sturdy, close spot weld construction . . . padlock hasp . . . 22" long, 7¾" wide, 3½" deep. Box weighs 8½ pounds.

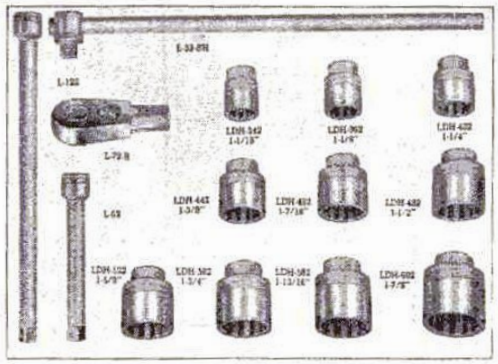
L-225—HEAVY DUTY SET. Tools only .....
L-225-B—HEAVY DUTY SET. In No. 24-B Metal Box ..
NO. 24-B—METAL BOX only .....

L-215 Heavy Duty Loxocket Set

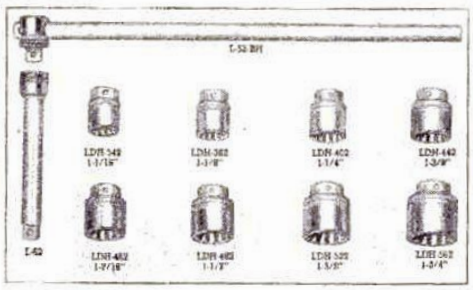
For years this selection of Heavy Duty Units has been the choice of a large majority of mechanics. Men working in fleet shops or truck and bus shops are especially enthusiastic about the convenience, power, and safe operation provided by this Heavy Duty Loxocket Set. The ten Loxocket wrench sizes included cover a range from 1 1/16" to 1 7/8". The combination Sliding Tee and Offset Handle and the powerful and compact Ratchet both use the same 24½" handle, saving you the cost of an additional handle. 2 Extension Bars of 8" and 16" length complete the set.



L-215 Set
Contains 14 Units



L-215—HEAVY DUTY SET, illustrated. Tools only.....
L-215-B—HEAVY DUTY SET. Complete in No. 24-B Metal Box.....
L-205—HEAVY DUTY SET. Contains Sliding Bar, 2 Extension Bars, and 8 Sockets—LDH-342, LDH-362, LDH-402, LDH-442, LDH-462, LDH-482, LDH-522, and LDH-562. Tools only.....
L-205-B—HEAVY DUTY SET. Complete in No. 24-B Metal Box.....



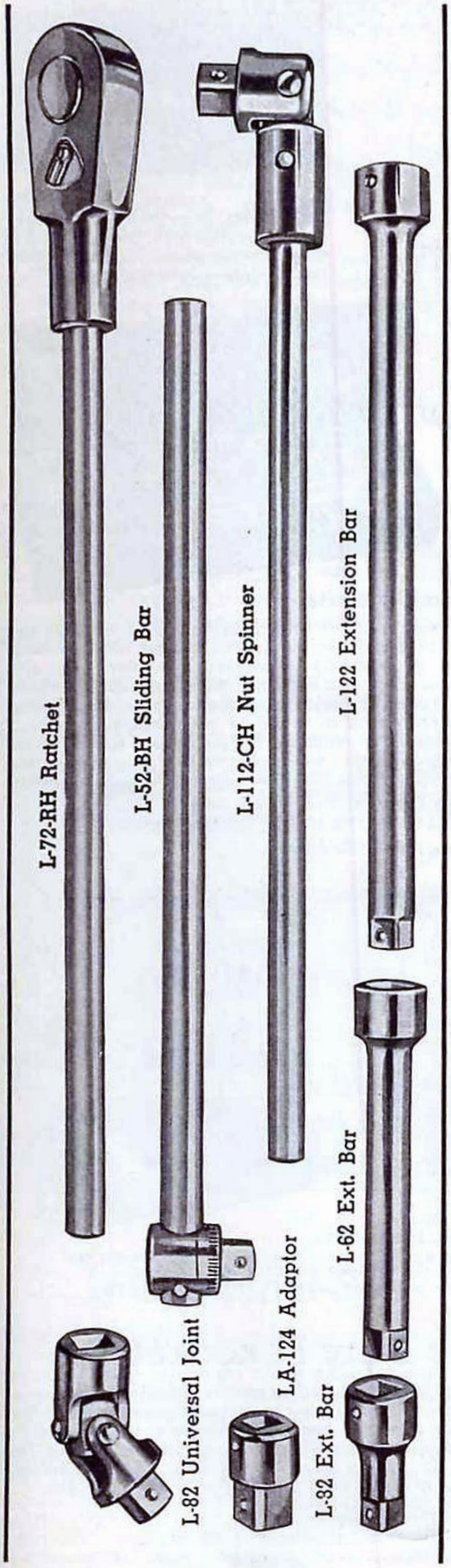
L-210 Heavy Duty Loxocket Set

A set of Heavy Duty Loxocket units selected to provide maximum utility at minimum cost. For the mechanic building up his tool equipment or who has only occasional need for these powerful socket wrenches nothing could be better. Eight of the most essential socket sizes, a combination Sliding Tee and Offset Handle, and an 8" Extension Bar. There's a lot of power in this small set, and it will handle many heavy duty jobs in the average garage.

L-210—HEAVY DUTY SET. Tools only.....
L-210-B—HEAVY DUTY SET. Complete in No. 24-B Metal Box .....

See pages 18 and 19 for complete list of Heavy Duty (¾" square drive) units.

For Twenty-five Years the Standard of Highest Quality



H. DUTY LOXOCKET HANDLES

Trade Mark (Lic. Reissue Pat. 19,287)

All Heavy Duty Units Made With 3/4" Square Drive

Ratchet—Detachable Type



(Pat. No. 1,854,513)

POWERFUL leverage to break loose the tightest of those larger nuts and bolts. Efficient, smooth working, reversible ratcheting action that speeds your work. Rugged construction to stand the most strenuous heavy duty work in general auto, bus, and truck repair shops, etc. Built into this tool is every conceivable improvement of design and construction, making it the most outstanding 3/4" drive heavy duty ratchet ever offered the trade.

Complete Tool			Ratchet Head Only					Handle Only			
Stock No.	Over all Lgth.	Price	Stock No.	Square Drive	Head Lgth.	Head Thickness	Price	Stock No.	Handle Diameter	Over-all Lgth.	Price
L-72-RH	23"		L-72-R	3/4"	6"	1 1/8"		L-72-H	13/16"	20"	

Heavy Duty Sliding Bar

Three Tools in one—a combination sliding bar handle and offset handle, while the attachment of an extension bar converts it to a Tee Handle. The Head can be purchased separately and used on the ratchet handle. Head is held at any point on the bar by a spring ball device.

Complete Tool			Sliding Tee Head Only				Handle Only			
Stock No.	Overall Length	Price	Stock No.	Square Drive	Head Depth	Price	Stock No.	Handle Diameter	Overall Length	Price
L-52-BH	20"		L-52-B	3/4"	2 5/16"		L-72-H	13/16"	20"	

Heavy Duty Nut Spinner

(Pat. Nos. 2,196,297 and 2,005,202)

A new Heavy Duty unit that offers the advantages of a Heavy Duty Nut Spinner Handle, an Offset Handle and an Angle Head Handle all in one. A feature of this tool is that it is used with the L-72-H Handle listed below, giving a maximum tool efficiency at a minimum cost. The entire unit is built to take those large, tough jobs which require extra powerful leverage to break loose large rusted-on nuts or frozen bolts or tighten them home.

Complete Tool			Swivel Head Only					Handle Only			
Stock No.	Over-all Lgth.	Price	Stock No.	Square Drive	Head Diameter	Head Depth	Price	Stock No.	Handle Diameter	Over-all Lgth.	Price
L-112-CH	21 1/2"		L-112-C	3/4"	1 9/16"	2 5/16"		L-72-H	13/16"	20"	

Handle for Ratchet, Sliding Bar and Nut Spinner

This handle is a solid high carbon alloy steel bar and is used for both the Heavy Duty Ratchet, Heavy Duty Sliding Bar and Heavy Duty Nut Spinner. One end is fitted with a locking device for attaching to ratchet head—easy to lock on or to remove.

L-72-H Handle, 13/16" Dia., 20" long. Each.....

Heavy Duty Extension Bars

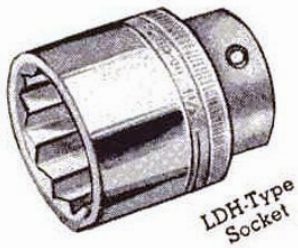
Extension Bars give you the extra reach you need on so many jobs . . . they are probably used on more operations than any other wrench handle. Made in three lengths for your working convenience.

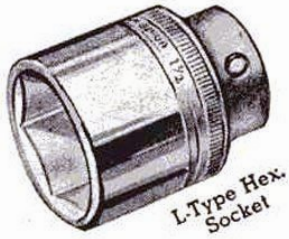
Stock No.	Square Drive	Shank Diameter	Shank Length	Price
L-32	3/4"	15/16"	3"	
L-62	3/4"	15/16"	8"	
L-122	3/4"	15/16"	16"	

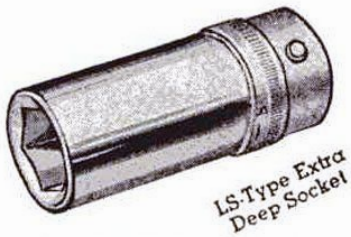
Heavy Duty Universal Joint

Whenever you must reach at an angle after a nut, you need a universal joint . . . this tool worms in and gets those around-the-corner and under-obstruction bolts that would otherwise have you sweating and tearing your hair. Works freely at abrupt angles.

Stock No.	Square Drive	Outside Diameter	Overall Length	Price
L-82	3/4"	1 5/8"	4 1/8"	


LDH-Type Socket


L-Type Hex. Socket


LS-Type Extra Deep Socket

HEAVY DUTY LOXOCKETS

Trade Mark (Lic. Reissue Pat. 19,287)

All Heavy Duty Loxockets Made with 3/4" Square Drive

WHEN there's *work to do* and big machines to do it . . . there's need for Snap-on Heavy Duty wrenches. To get those repair jobs out of the way quickly and efficiently . . . to get those machines running again in the shortest possible time . . . for *speed* and *safety* in servicing either shop machinery or outside equipment—*Put your money on Snap-on Heavy Duty Loxocket Wrenches.*

These Loxockets not only speed up the work, but the special locking device puts *"Safety"* into the hands of every operator and mechanic. In all types of Industry these tools are ideal for a large percentage of nut turning operations.

Double Broached Hexagon

Size of Openings in Inches	Double Hex. Sockets Stock No.	Price	Outside Diameter Socket End	Outside Diameter Drive End	Over-all Length
7/8	LDH-282		1 5/16"	1 7/16"	2"
15/16	LDH-302		1 3/8"	1 7/16"	2"
31/32	LDH-312		1 13/32"	1 7/16"	2"
1	LDH-322		1 29/64"	1 1/2"	2 1/16"
1 1/16	LDH-342		1 9/16"	1 1/2"	2 1/8"
1 1/8	LDH-362		1 5/8"	1 1/2"	2 3/16"
1 3/16	LDH-382		1 11/16"	1 1/2"	2 1/4"
1 1/4	LDH-402		1 25/32"	1 1/2"	2 1/4"
1 5/16	LDH-422-A		1 7/8"	1 5/8"	2 5/16"
1 3/8	LDH-442		1 15/16"	1 5/8"	2 5/16"
1 7/16	LDH-462		2 1/32"	1 5/8"	2 3/8"
1 1/2	LDH-482		2 3/32"	1 5/8"	2 1/2"
1 9/16	LDH-502		2 3/16"	1 3/4"	2 5/8"
1 5/8	LDH-522		2 1/4"	1 3/4"	2 5/8"
1 11/16	LDH-542		2 3/8"	1 3/4"	2 3/4"
1 3/4	LDH-562		2 13/32"	1 3/4"	2 3/4"
1 13/16	LDH-582		2 1/2"	1 3/4"	2 7/8"
1 7/8	LDH-602		2 9/16"	1 3/4"	3"
2	LDH-642		2 3/4"	1 3/4"	3 1/8"
2 1/8	LDH-682		2 15/16"	1 3/4"	3 1/4"
2 3/16	LDH-702		2 15/16"	1 3/4"	3 1/4"
2 1/4	LDH-722		3 1/8"	1 3/4"	3 3/8"

For Bolt Size

Size of Openings in Inches	Regular Series Unfinished Bolts	Regular Series Nuts & Finished Bolts	Light Series Nuts & Castle Nuts	Cap Screws	Set Screws
7/8	9/16"	9/16"	9/16"	5/8"	7/8"
15/16	5/8"	.....	5/8"	.....	.....
31/32	.....	.....	.....	.....	.....
1	.....	5/8"	.....	3/4"	1"
1 1/16	.....	.....	3/4"	.....	.....
1 1/8	3/4"	3/4"	.....	7/8"	1 1/8"
1 3/16	.....	.....	.....	.....	.....
1 1/4	.....	.....	7/8"	.....	1 1/4"
1 5/16	7/8"	7/8"	.....	1"	.....
1 3/8	.....	.....	.....	.....	1 3/8"
1 7/16	.....	.....	1"	.....	.....
1 1/2	1"	1"	.....	1 1/8"	1 1/2"
1 9/16	.....	.....	.....	.....	.....
1 5/8	.....	.....	1 1/8"	.....	.....
1 11/16	1 1/8"	1 1/8"	.....	1 1/4"	.....
1 3/4	.....	.....	.....	.....	.....
1 13/16	.....	.....	1 1/4"	.....	.....
1 7/8	1 1/4"	1 1/4"	.....	.....	.....
2	.....	.....	1 3/8"	.....	.....
2 1/8	.....	.....	.....	.....	.....
2 3/16	.....	.....	1/2"	.....	.....
2 1/4	1 1/2"	1 1/2"	.....	.....	.....

Single Broached Hexagon

Size of Openings in Inches	Single Hex. Sockets Stock No.	Price	Outside Diameter Socket End	Outside Diameter Drive End	Over-all Length
15/16	L-302		1 3/8"	1 7/16"	2"
31/32	L-312		1 13/32"	1 7/16"	2"
1	L-322		1 29/64"	1 1/2"	2 1/16"
1 1/16	L-342		1 9/16"	1 1/2"	2 1/8"
1 1/8	L-362		1 5/8"	1 1/2"	2 3/16"
1 3/16	L-382		1 11/16"	1 1/2"	2 1/4"
1 1/4	L-402		1 25/32"	1 1/2"	2 1/4"
1 5/16	L-422-A		1 7/8"	1 5/8"	2 5/16"
1 3/8	L-442		1 15/16"	1 5/8"	2 5/16"
1 7/16	L-462		2 1/32"	1 5/8"	2 3/8"
1 1/2	L-482		2 3/32"	1 5/8"	2 1/2"
1 9/16	L-502		2 3/16"	1 3/4"	2 5/8"
1 5/8	L-522		2 1/4"	1 3/4"	2 5/8"
1 11/16	L-542		2 3/8"	1 3/4"	2 3/4"
1 3/4	L-562		2 13/32"	1 3/4"	2 3/4"
1 13/16	L-582		2 1/2"	1 3/4"	2 7/8"
1 7/8	L-602		2 9/16"	1 3/4"	3"
2	L-642		2 3/4"	1 3/4"	3 1/8"

Extra Deep Hexagon Loxockets

Size of Openings in Inches	Extra Deep Hex. Sockets Stock No.	Price	Outside Diameter Socket End	Outside Diameter Drive End	Over-all Length	Regular Series Unfinished Bolts	Regular Series Nuts & Finished Bolts	Light Series Nuts & Castle Nuts	Cap Screws	Set Screws
15/16	LS-302		1 3/8"	1 7/16"	3 1/2"	5/8"	.....	5/8"	.....	.....
1	LS-322		1 29/64"	1 1/2"	3 1/2"	.....	5/8"	.....	3/4"	1"
1 1/16	LS-342		1 9/16"	1 1/2"	3 1/2"	.....	.....	3/4"	.....	.....
1 1/8	LS-362		1 5/8"	1 1/2"	3 1/2"	3/4"	3/4"	.....	7/8"	1 1/8"
1 1/4	LS-402		1 25/32"	1 1/2"	3 1/2"	.....	.....	7/8"	.....	1 1/4"
1 7/16	LS-462		2 1/32"	1 5/8"	3 1/2"	.....	.....	1"	.....	.....
1 1/2	LS-482		2 3/32"	1 5/8"	3 1/2"	1"	1"	.....	1 1/8"	1 1/2"
1 5/8	LS-522		2 1/4"	1 3/4"	3 1/2"	.....	.....	1 1/8"	.....	.....

Handle and Socket Adaptors

These adaptors allow you to interchange your Heavy Duty (3/4" square drive) wrenches with Master (1/2" square drive), old style Heavy Duty (5/8" square drive), and Extra Heavy Duty (1" square drive) units. Increase the working range of your set with these adaptors. Illustrated on page 18.

Stock No.	Handle End	Drive End	Overall Length	Outside Diameter	Price
LA-12	1/2"	3/4"	1 11/16"	1"	
LA-62	3/4"	1/2"	1 13/16"	1 7/16"	
LA-52	3/4"	5/8"	1 13/16"	1 7/16"	
LA-32	5/8"	3/4"	1 11/16"	1 3/16"	
LA-72	3/4"	1"	2 1/4"	1 7/16"	
LA-124	1"	3/4"	2 3/8"	1 7/8"	

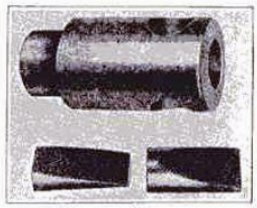
Heavy Duty Stud Puller

This puller works on the wedge principle and takes a positive grip which cannot be released except as the operator wishes. The release of the wedge is accomplished by a turn in the reverse direction.

The body of the tool is machined from a special alloy steel selected for its exceptional toughness and hardening qualities. Two sizes of special alloy steel wedges, chapmanized to provide a tough core and extremely hard surface, are milled in two directions to assure a grip on the hardest studs.

Designed for use with a 3/4" square drive handle . . . accommodates studs from 9/16" to 1" diameter.

LA-55—HEAVY DUTY STUD PULLER . . .



For Twenty-five Years the Standard of Highest Quality



Complete Socket Range 1-7/16" to 3-1/8"

The complete range of Extra Heavy Duty Loxocket sizes and handle equipment is given in detail on page 21. Wrench sizes range from 1 7/16" to 3 1/8" inclusive.

The Loxocket principle makes any combination of these units as *safe as a one-piece wrench* . . . they lock together securely and will not accidentally come apart . . . a convenient release button allows you to swiftly and easily interchange sockets. We recommend this equipment for speeding up the heaviest nut-turning work in truck or bus shops—installation and maintenance on marine and mine machinery—all power plants and transmitting machinery—locomotive shops, etc.

with Snap-on Extra Heavy Duty Loxocket Wrenches

Trade Mark (Lic. Reissue Pat. 19,287)

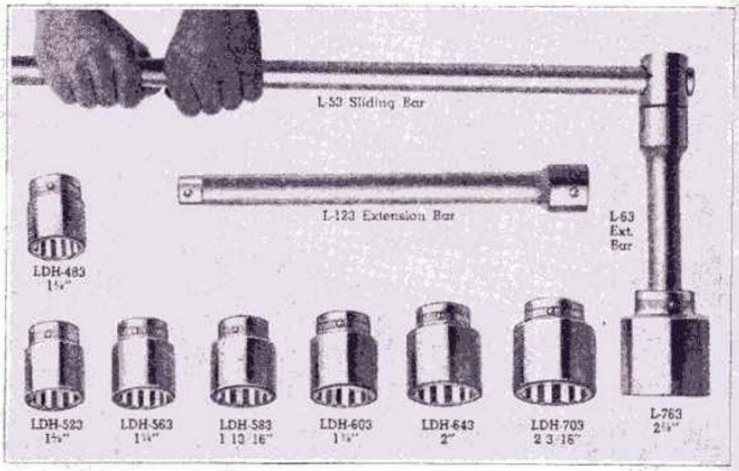
1" Square Drive

HOW complete and how modern is your tool equipment? . . . Take the worry out of breakdowns with Snap-on wrenches. Pitch into every repair job with confidence that it will be finished at a *definite* time . . . and in the *shortest* time.

Here are tools with the compact power of a prize-fighter's fist . . . built to break loose those big rusted-on nuts and bolts or to pull them up to the tightest degree.

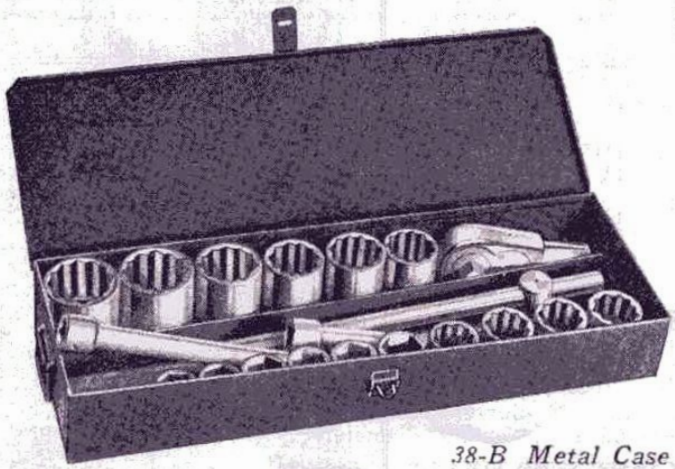
Made according to Snap-on's new Loxocket design, these Extra Heavy Duty tools are *Lighter . . . Stronger . . . Safer* than ever before. Here is tremendous power and leverage to accomplish more work easier and with less fatigue.

L-1800 Extra Heavy Duty Set



Including eight powerful hexagon sockets in the following sizes, 1½" 1⅝", 1¾", 1 13/16" 1⅞", 2", 2 3/16" and 2⅜". A thirty inch Sliding Bar and two Extension Bars are included in the set and provide a total of sixty-four different wrench combinations that will cover a large percentage of big nut turning operations. You'll get more *work value* per pound of muscle out of Snap-on Extra Heavy Duty Loxockets than from ordinary tools . . . more *speed, safety,* and *efficiency*—less brawn is required and your workman is fresher when he is through . . . your equipment is back on the job with less delay.

L-1800—EXTRA HEAVY DUTY LOXOCKET SET. Tools only



38-B Metal Case

Case for Extra Heavy Duty Sets

This especially sturdy case is large enough to accommodate the complete series of Extra Heavy Duty Loxockets together with all handles belonging to this series. Strongly constructed from 16-gauge sheet steel—closely spot welded together for durability and strength under hard working conditions.

The lid is fitted with four good hinges and a hefty padlock hasp . . . also is equipped with good size carrying handles at each end. Finished in grey enamel.

Size—32½" long . . . 11" wide . . . 4¾" deep. Weight—25 lbs.

NO. 38-B—METAL CASE. Each . . . . . .

See page 21 for complete list of Extra Heavy Duty (1" square drive) Loxocket units

EXTRA HEAVY DUTY HANDLES AND SOCKETS

1" Square Drive

Ratchet and Detachable Handle

Pat. No. 1,854,513

SURE grip, rugged strength, tremendous leverage, and high speed ratchet action combine to chase away the nightmare of costly delays and shutdowns . . . *in the shop or on the job.* Built to *"take it"* . . . this tool is recommended without hesitation for the toughest kind of work.
The head detaches from the handle quickly and easily and is a solid forging as illustrated. All working parts are accurately machined from special alloy electric furnace steels, heat treated to give the utmost strength and durability. Specially hardened inserted bearings are fitted into the housing to provide all possible resistance to natural wear.
The ratchet action requires only space for a 20 degree handle movement to operate properly.

Complete Tool			Head Only				Handle Only			
Stock No.	Overall Length	Price	Stock No.	Head Length	Head Thick's	Price	Stock No.	Handle Diam.	Handle Length	Price
L-73	33½"		L-73-A	7 13/16"	1 7/16"		L-53-H	1⅛"	30"	

Extra Heavy Duty Sliding Bar

Thirty full inches of tremendous leverage when this tool is used as an Offset Handle. Where is the nut that could withstand such a pull? The head can be used in any position on the bar or as a tee wrench in combination with an extension bar.

Complete Tool			Head Only				Handle			
Stock No.	Overall Length	Price	Stock No.	Square Drive	Head Depth	Price	Stock No.	Handle Diam.	Handle Length	Price
L-53	30"		L-53-A	1"	3 1/16"		L-53-H	1⅛"	30"	

Extra Heavy Duty Extension Bars

Two different length Extension Bars that give you valuable adaptability of the Ratchet or Sliding Bar to nuts and bolts down in deep holes or crevices where other tools will not reach. They are one piece units made to stand all the strain the Extra Heavy Duty handles can build up.

Stock No.	Square Drive	Shank Diam.	Shank Length	Price
L-63	1"	1¼"	8"	
L-123	1"	1¼"	16"	

Hexagon Sockets

Fit companions to the Extra Heavy Duty Handles are the Loxockets that work with them . . . 18 single broached sockets of precision machined alloy steel, ranging in size from 1 7/16" to 3⅛". *"Keep Going"* with these tools that make small work of big tie-ups—give you adequate wrench performance at all times.

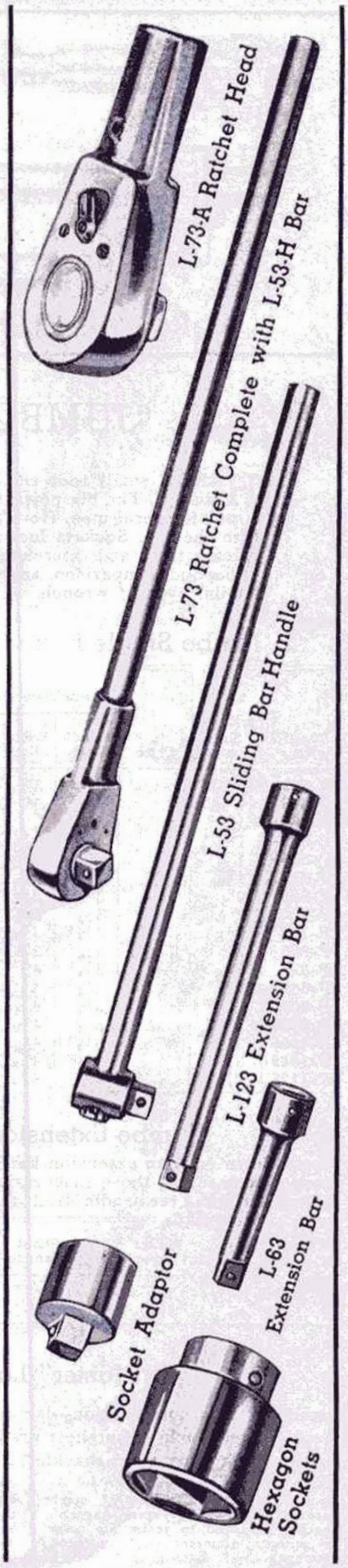
Size of Opening		Hexagon Sockets		Outside Diameter		Overall Length	Regular Series		Light Series	Cap Screws	Set Screws
		Stock No.	Price	Socket End	Drive End		Unfinished Bolts	Nuts & Finished Bolts	Nuts & Castle Nuts		
1 7/16"	Double Broached	LDH-463		2 3/16"	2"	2 5/8"			1"		
1½"		LDH-483		2¼"	2"	2¾"	1"	1"		1⅛"	1½"
1 5/8"		LDH-523		2 3/8"	2"	2 7/8"			1⅛"		
1 11/16"		LDH-543		2½"	2"	3"	1⅛"	1⅛"		1¼"	
1¾"		LDH-563		2 9/16"	2"	3"					
1 13/16"		LDH-583		2 11/16"	2⅛"	3⅛"			1¼"		
1 7/8"		LDH-603		2¾"	2⅛"	3¼"	1¼"	1¼"			
2"		LDH-643		2 15/16"	2⅛"	3⅜"			1⅜"		
2⅛"		LDH-683		3⅛"	2¼"	3½"					
2 3/16"		LDH-703		3⅛"	2¼"	3 5/8"			1½"		
2¼"		LDH-723		3 5/16"	2¼"	3¾"	1½"	1½"			
2 3/8"	Single Broached	L-763		3 3/8"	2¼"	3 7/8"					
2½"		L-803		3½"	2¼"	4⅛"					
2 5/8"		L-843		3 21/32"	2¼"	4¼"	1¾"	1¾"			
2¾"		L-883		3 13/16"	2¼"	4 1/16"					
2 15/16"		L-943		4 1/16"	2⅜"	4 7/8"					
3" 1/8		L-1003		4 19/64"	2⅜"	5"					

Larger Sizes Available on Special Order.

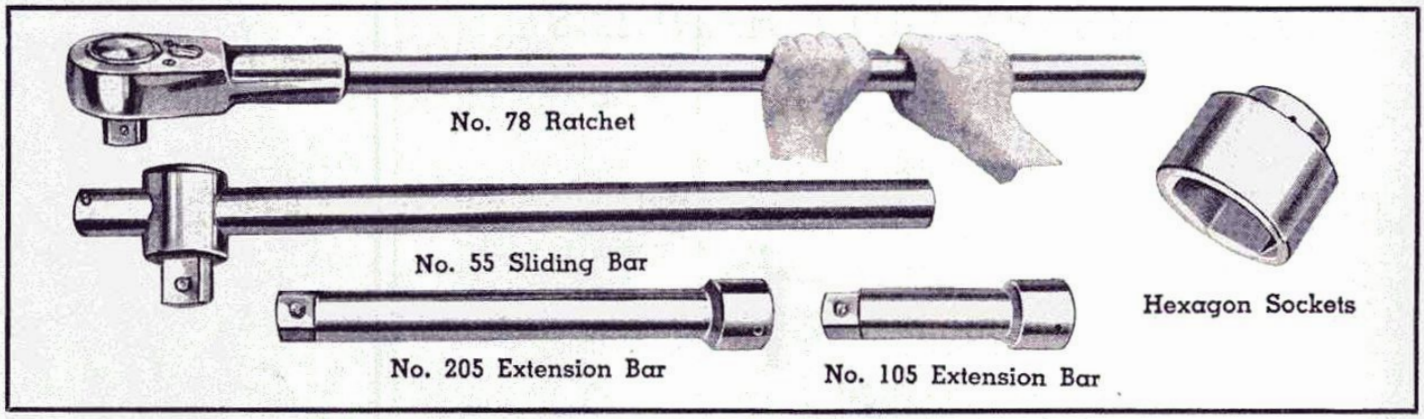
Handle and Socket Adaptors

These two adaptors enable you to interchange your Extra Heavy Duty Loxockets with Heavy Duty (¾" square drive) units. Increases the utility and working value of your tool equipment.

Stock No.	Handle End	Drive End	Overall Length	Outside Diameter	Price
LA-72	¾"	1"	2¼"	1 7/16"	
LA-124	1"	¾"	2⅜"	1⅞"	



Jumbo Wrenches



"JUMBO" WRENCHES (1½" Square Drive)

License Reissue Patent 19,287

HERE'S small tool efficiency for your biggest jobs . . . nut-to-nut speed that makes short work of big tie-ups. The big powerful tools are easily handled by one man . . . *used easily* . . . *used quickly* . . . save the time of several men. Here are tools that give a man the *assurance of safety* and enable him to put all his "beef" into the job. Sockets lock securely on the handles and cannot pull off by accident . . . takes only a jiffy to release them and interchange the units. The high quality of material and workmanship of Snap-on wrenches is beyond comparison, and these, the largest of Snap-on standard wrenches, are built to out-perform any other similar type of wrench.

Jumbo Single Hexagon Sockets

Stock No.	Wrench Size Nominal	Price	Outside Diameter		Overall Length	Bolt Size Regular Series	
			Handle End	Socket End		Unfinished Bolts	Nuts & Finished Bolts
IP-525	1 5/8"		3"	3"	3"	.....	.....
IP-545	1 11/16"		3"	3"	3"	1 1/8"	1 1/8"
IP-565	1 3/4"		3"	3"	3 1/4"	.....	.....
IP-585	1 13/16"		3 1/8"	3 1/8"	3 3/8"	.....	.....
IP-605	1 7/8"		3 1/8"	3 1/8"	3 3/8"	1 1/4"	1 1/4"
IP-625-A	1 15/16"		3 1/4"	3 1/4"	3 1/2"	.....	.....
IP-645	2"		3 1/4"	3 1/4"	3 5/8"	.....	.....
IP-705	2 3/16"		3 1/4"	3 1/2"	3 3/4"	.....	.....
IP-765	2 3/8"		3 1/4"	3 3/4"	4"	.....	.....
IP-805	2 1/2"		3 1/4"	3 7/8"	4"	.....	.....
IP-825	2 9/16"		3 1/4"	4"	4 1/8"	.....	.....
IP-885	2 3/4"		3 1/4"	4 1/8"	4 1/4"	.....	.....
IP-905	2 13/16"		3 1/4"	4 1/4"	4 1/4"	1 7/8"	1 7/8"
IP-965	3"		3 1/4"	4 1/2"	4 1/2"	2"	2"
IP-1005	3 1/8"		3 1/4"	4 3/4"	4 5/8"	.....	.....
IP-1045	3 1/4"		3 1/4"	4 7/8"	4 5/8"	.....	.....
IP-1125	3 1/2"		3 1/4"	5 1/8"	4 5/8"	.....	.....

Jumbo Extension Bars

Reach down with an extension bar into recesses and other close places to get those inaccessible nuts. Converts your sliding bar into a tee handle. Built to take the heaviest work.

Stock No.	Square Drive	Shank Diameter	Shank Length	Price
105	1½"	1 15/16"	10"	
205	1½"	1 15/16"	20"	

Jumbo Ratchet Wrench

Patent No. 1,854,513

With Detachable Handle

It's the most powerful ratchet we've ever built . . . 42 inches of tremendous leverage . . . constructed to give you small tool speed on the biggest, toughest nut turning jobs. With every part machined to precision standards this ratchet works as smoothly and surely as a well oiled piston. It squeezes into places ordinary large wrenches cannot go . . . it clears most obstructions with room to spare. Conveniently placed lever instantly reverses action. Hardened bearings inserted into the housing minimize normal wear. Every part is made to stand up under the toughest kind of use.

Complete Tool

Stock No.	Overall Length	Price
No. 78	42"	

Head Only					Handle Only			
Stock No.	Square Drive	Head Diameter	Head Thickness	Price	Stock No.	Handle Diameter	Handle Length	Price
78-Y	1½"	4"	1 15/16"		55-B	1 3/8"	36"	

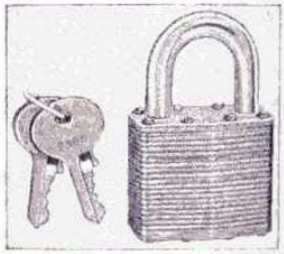
Jumbo Sliding Bar Handle

Used as an offset handle this tool gives you thirty-six inches of brute leverage. Power enough to turn any nut up to 4⅝" across the flats no matter how tight it might be.

Stock No.	Square Drive	Head Depth	Handle Diameter	Overall Length	Price
55	1½"	2½"	1 3/8"	36"	

"Master" Laminated, Pin-Tumbler Padlocks

Strongest case construction—laminated under 300,000 lbs. pressure forming a case stronger than a solid steel block . . . highest grade brass cylinder, nickel-silver pin tumbler mechanism . . . super strength alloy steel shackle . . . heavy solid brass locking lever . . . cannot jar open.



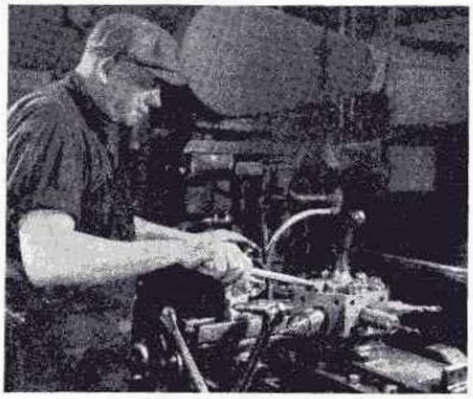
No. 1 MASTER LOCK—1¾" steel case. Chrome-nickle steel tapered shackle hardened to resist file, saw or cutter; diameter 5/16", vertical clearance 13/16". Each.....

No. 3 MASTER LOCK—1½" Steel case. Chrome-nickel steel shackle hardened to resist file, saw or cutter; diameter 9/32", vertical clearance 5/8". Each .....

No. 7 MASTER LOCK—Steel case. Manganese steel shackle, diameter 5/16". Vertical clearance 9/16".

Each .....

SNAP-ON—BLUE-POINT TOOLS . . . *The Choice of Better Mechanics!*



Adjusting a turret lathe set-up with XD type Boxocket. These tools invite the confident wrench speed and power that saves precious seconds in production and assembly work.



Heavy Duty Boxockets are ideal for jobs like this where plenty of power and leverage is required to break loose those big, rusted-on nuts.

BOXOCKET WRENCH SECTION

Trade Name Reg. U. S. Pat. Office

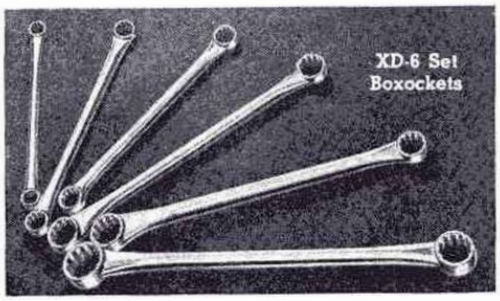
RUSTED-ON, mud-coated parts . . . repairs and service on all kinds of machinery . . . it's all in a day's work to Snap-on Boxockets. There's thirteen different series of Boxockets listed on the following pages and ranging in wrench sizes from 3/16" to 4 5/8" inclusive.

Stronger—Safer. Boxockets *completely circle the nut,* catch all six corners and *distribute* the pulling strain, combine socket wrench grip with direct leverage . . . Boxockets can't slip off the nut and can't spread on the nut.

Half the Space. Double broached Boxocket walls give *double* the gripping points of an end wrench—require only *half the space* for full handle movement.

15° Angle Boxocket Wrenches

Straight handle Boxocket Wrenches with heads set at a 15° angle. The straight handle allows the wrench to be used in many corners where an offset would be awkward, while the 15° angle head provides handle clearance from obstructions together with a long, direct pulling leverage. Different size openings on each end make each handle do double duty.



XD-6 Set—Consisting of the following six wrenches giving sizes from 7/16" up to 1" without duplication. Nos. XD-1416, XD-1820, XD-1922, XD-2526, XD-2428 and XD-3032. Tools only.....

XD-6K Set—Above tools in No. C-61 leatherette kit .....

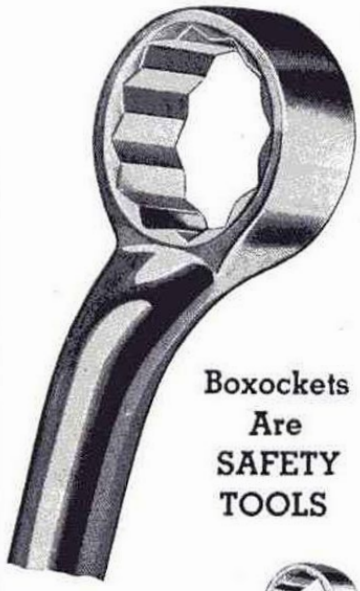
XD-5 Set—Contains five popular wrench sizes 7/16" to 7/8". XD-1416, XD-1820, XD-1922, XD-2526 and XD-2428. Tools only .....

XD-5K Set—Above tools in No. C-61 leatherette kit .....



This illustrates the type of all numbers, showing the 15° angle of clearance. Double broached hexagon openings, made of Electric Furnace tool steel, carefully heat-treated, chromium plated finish.

Size of Openings	Stock No.	Price	Diameter of Head	Overall Length	Regular Series		Light Series
					Unfinished Bolts	Nuts & Finished Bolts	Nuts & Castle Nuts
3/8" & 7/16"	XD-1214		37/64" & 43/64"	8 1/2"	1/4"	1/4"	1/4"
7/16" & 1/2"	XD-1416		43/64" & 3/4"	8 7/8"	5/16"	1/4"	1/4" & 5/16"
1/2" & 9/16"	XD-1618		3/4" & 27/32"	9 1/4"	5/16" & 3/8"	5/16"	5/16" & 3/8"
9/16" & 5/8"	XD-1820		27/32" & 59/64"	9 5/8"	3/8" & 7/16"	5/16" & 3/8"	3/8" & 7/16"
13/32" & 11/16"	XD-1922		57/64" & 1 1/64"	10"			
5/8" & 11/16"	XD-2022		59/64" & 1 1/64"	10 3/8"	7/16"	3/8"	7/16"
5/8" & 3/4"	XD-2024		59/64" & 1 3/32"	10 7/8"	7/16" & 1/2"	3/8" & 7/16"	7/16" & 1/2"
11/16" & 3/4"	XD-2224		1 1/64" & 1 3/32"	11 1/4"	1/2"	7/16"	1/2"
25/32" & 13/16"	XD-2526		1 9/64" & 1 3/16"	11 7/8"		1/2"	
3/4" & 7/8"	XD-2428		1 3/32" & 1 17/64"	12 3/8"	1/2" & 9/16"	7/16" & 9/16"	1/2" & 9/16"
13/16" & 7/8"	XD-2628		1 3/16" & 1 17/64"	12 15/16"	9/16"	1/2" & 9/16"	9/16"
7/8" & 15/16"	XD-2830		1 17/64" & 1 23/64"	12 15/16"	9/16" & 5/8"	9/16"	9/16" & 5/8"
15/16" & 1"	XD-3032		1 23/64" & 1 7/16"	13 9/16"	5/8"	5/8"	5/8"
1 1/16" & 1 1/8"	XD-3436		1 19/32" & 1 43/64"	15 1/2"	3/4"	3/4"	3/4"
1 1/16" & 1 1/4"	XD-3440		1 19/32" & 1 27/32"	16 1/4"			3/4" & 7/8"
1 1/8" & 1 1/4"	XD-3640		1 43/64" & 1 27/32"	17"	3/4"	3/4"	7/8"

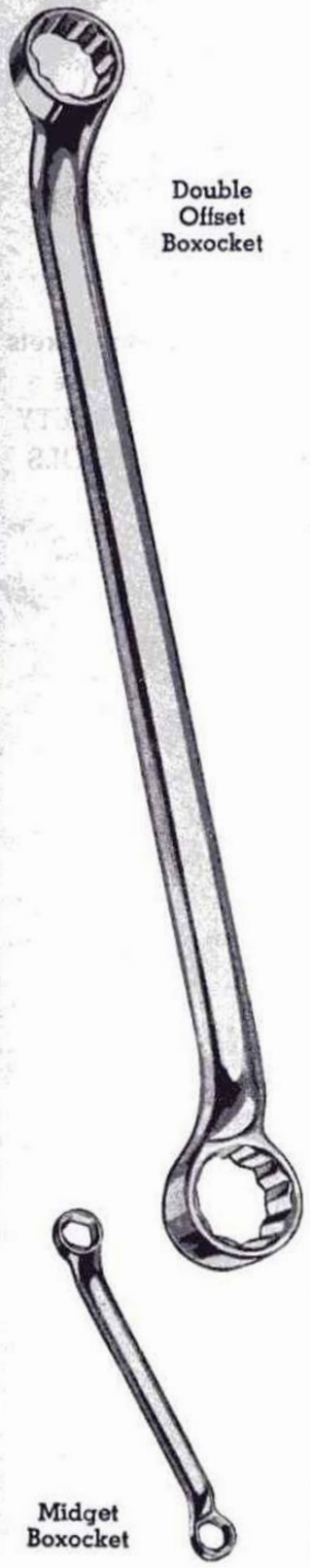


Boxockets Are SAFETY TOOLS



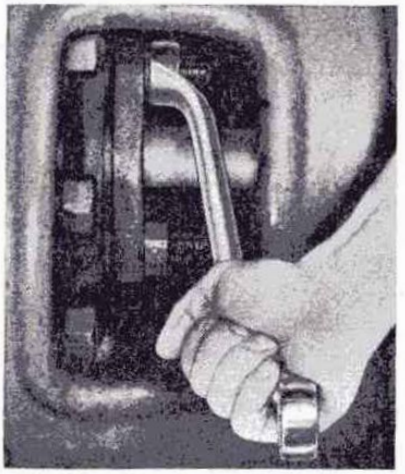
15° Angle Boxocket

For Twenty-five Years the Standard of Highest Quality



DOUBLE OFFSET BOXOCKETS

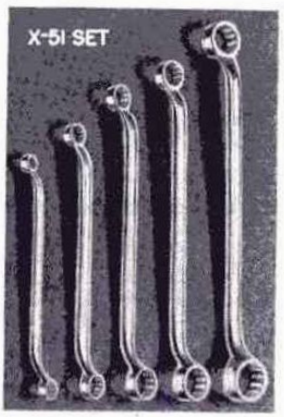
Adaptable to Every Boxocket Job



This Offset Boxocket works freely inside the housing . . . fits over the protruding bolt. Handle length allows the mechanic to work easily and with speed.

POWERFUL leverage . . . Strength . . . Balanced Design . . . Safety . . . Speed . . . Convenience. These tools embody all the advantages that Boxocket construction has to offer. Each Boxocket in this double offset series provides two different wrench sizes on one handle, and the complete series contains a full range of sizes from 3/8" up to and including 2".

Long handles are provided which give plenty of leverage for breaking those tough nuts loose or for pulling them up tight. The wrench heads, placed as they are at a deep offset from the handle to give clearance room from obstructions, are knuckle savers on many a tough nut turning job. Most mechanics too prefer these round shaped handles which provide a comfortable, full size hand grip. Add a set of these tools to your kit and know real wrench convenience.



X-50 Set—Containing one each of X-1416, X-1820, X-1922, X-2526, and X2428. Tools only.....

X-50K Set—The above set complete in C-61 Kit Bag..

X-70 Set—Containing one each of X-1416, X-1618, X-1820, X-1922, X-2024, X-2428, and X-2526. Tools only.....

X-70K Set—The above set complete in C-71 Kit Bag...

Size of Openings In Inches	Stock No.	Price	Diameter of Head	Overall Length Inches	Regular Series		Light Series
					Unfinished Bolts	Nuts & Finished Bolts	Nuts & Castle Nuts
3/8 & 7/16	X-1214		37/64" & 43/64"	8 1/4	1/4"	1/4"	1/4"
7/16 & 1/2	X-1416		43/64" & 3/4"	8 11/16	5/16"	1/4"	1/4" & 5/16"
1/2 & 9/16	X-1618		3/4" & 27/32"	9 1/16	5/16" & 3/8"	5/16"	5/16" & 3/8"
9/16 & 5/8	X-1820		27/32" & 59/64"	9 27/64	3/8" & 7/16"	5/16" & 3/8"	3/8" & 7/16"
19/32 & 11/16	X-1922		59/64" & 1 1/64"	10			
5/8 & 11/16	X-2022		59/64" & 1 1/64"	10	7/16"	3/8"	
5/8 & 3/4	X-2024		59/64" & 1 3/32"	10 9/32	7/16" & 1/2"	3/8" & 7/16"	7/16" & 1/2"
11/16 & 13/16	X-2226		1 1/64" & 1 3/16"	11 9/64		1/2"	
3/4 & 7/8	X-2428		1 3/32" & 1 17/64"	12 1/8	1/2" & 9/16"	7/16" & 9/16"	1/2" & 9/16"
25/32 & 13/16	X-2526		1 1/8" & 1 11/64"	11 5/8"		1/2"	
13/16 & 7/8	X-2628		1 11/64" & 1 1/4"	11 11/16"	9/16"	9/16"	9/16"
15/16 & 1	X-3032		1 23/64" & 1 7/16"	13 7/32	5/8"	5/8"	5/8"
1 1/16 & 1 1/8	X-3436		1 19/32" & 1 43/64"	15 3/16	3/4"	3/4"	3/4"
1 3/16 & 1 5/16	X-3842		1 25/32" & 1 15/16"	16 11/32	7/8"	7/8"	7/8"
1 1/4 & 1 3/8	X-4044		1 27/32" & 2"	16 11/32			
1 3/8 & 1 1/2	X-4448		2" & 2 19/64"	19 11/64	1"	1"	1" & 1 1/8"
1 7/16 & 1 5/8	X-4652		2 1/8" & 2 23/64"	20 17/64			1 1/4"
1 3/4 & 1 13/16	X-5658		2 41/64" & 2 45/64"	20 5/8"			1 3/8"
1 7/8 & 2	X-6064		2 53/64" & 3 1/64"	23 7/8	1 1/4"	1 1/4"	

Midget Boxocket Wrenches

Trade Name



Four Midget Boxockets designed for ignition and carburetor work, radio service, meter repair, and all work where tiny nuts must be turned. Both ends are offset to clear small obstructions, and openings are broached accurately to size to fit these tiny nuts perfectly.

XI-4—SET. Containing one each of the tools below. Tools only .

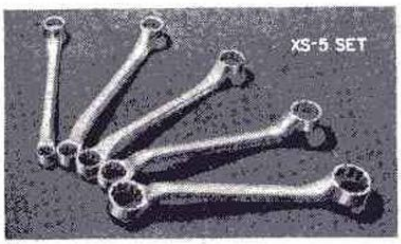
XI-4K—SET. Above set in C-52 Leatherette Kit Bag.....

Size of Openings in Inches	Stock No.	Price	Head Diameter in Inches	Depth of Head	Overall Length	Set Screws
3/16 & 13/64	XI-1213		19/64 & 21/64	3/8" & 9/64"	2 13/16"	
7/32 & 15/64	XI-1415		11/32 & 25/64	1/4" & 5/32"	3 5/32"	
1/4 & 9/32	XI-1618		3/8 & 27/64	5/32" & 11/64"	3 3/8"	1/4"
5/16 & 11/32	XI-2022		11/32 & 31/64	11/64 & 3/16"	3 3/4"	5/16"

Trade-Mark Dwarf Boxocket Wrenches

ONE OF the most popular wrenches we have ever designed . . . handles are short enough for easy work in close places, yet give ample leverage . . . heads are offset to clear nearby bolt heads or other obstructions . . . wrench openings are double broached for free nut turning where handle space is limited and each tool has two wrench sizes.

Ideally suited for all close quarter jobs such as manifolds, starter, generator, water pumps, distributor mountings, universal joints, etc.,—a set of Dwarf Boxockets is a valuable working addition to any mechanics' tool kit.



XS-5A — DWARF BOXOCKET SET. Five wrenches containing popular wrench sizes 5/16" to 3/4". Includes XS-1012, XS-1416, XS-1618, XS-1820, XS-2024.

Tools only .....

XS-5AK—SET, Above tools in C-50 Kit Bag

XS-3—DWARF BOXOCKET SET. Six wrench sizes without duplication on three handles. XS-1214, XS-1618, XS-2024. Tools only...

XS-3K—SET. Above set in C-50 Kit Bag..

Size of Openings In Inches	Stock No.	Price	Diameter of Head	Overall Length Inches	Regular Series		Light Series
					Unfinished Bolts	Nuts & Finished Bolts	Nuts & Castle Nuts
5/16 & 3/8	XS-1012		29/64" & 35/64"	4 1/2"	.....	1/4"	.....
3/8 & 7/16	XS-1214		9/16" & 41/64"	4 13/16"	1/4"	.....	1/4"
7/16 & 1/2	XS-1416		41/64" & 47/64"	5 1/4"	.....	5/16"	1/4" .....
1/2 & 9/16	XS-1618		47/64" & 13/16"	5 1/2"	5/16" & 3/8"	.....	5/16"
9/16 & 5/8	XS-1820		13/16" & 29/32"	5 13/16"	3/8" & 7/16"	5/16" & 3/8"	3/8" & 7/16"
5/8 & 3/4	XS-2024		29/32" & 1 3/64"	6 3/16"	7/16" & 1/2"	3/8" & 7/16"	7/16" & 1/2"

Flare Nut Wrenches

A series of wide sided, thin-walled, split boxockets especially designed to operate over tubing and pipes in very close places . . . this type of tool will not damage soft brass flare nuts. Refrigeration, Air-conditioning, and Aircraft service men will find them particularly useful.



Tightening brass tube flare nuts such as pictured above can be accomplished quickly and without danger of damage to the soft metal when these special flare nut wrenches are used. The split boxocket type wrench head slips over the tubing and onto the nut . . . grips the nut on five sides to distribute the turning strain . . . cannot slip and chew the nut.

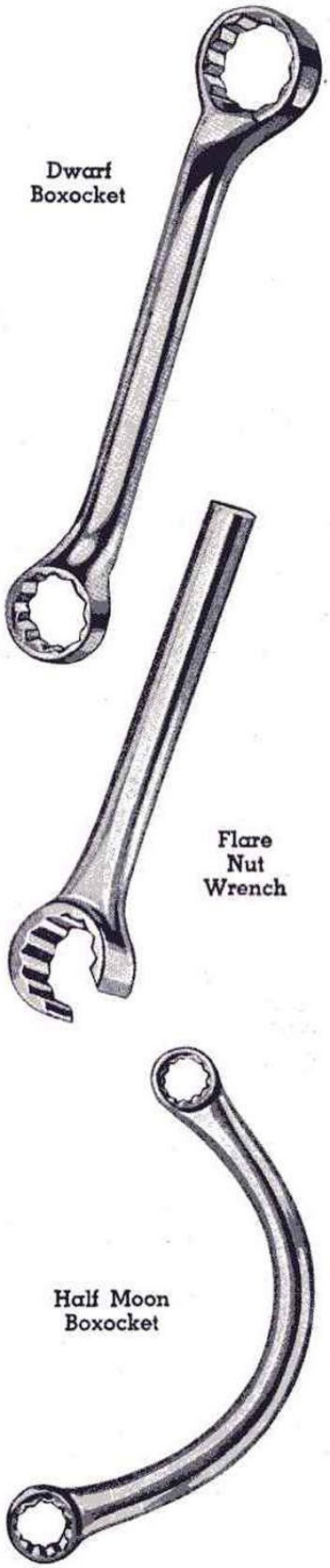
Wrench Size	Stock No.	Price	Head Diameter	Head Depth	Overall Length
3/8	RX-12		25/32"	5/16	6 3/8
7/16	RX-14		55/64"	11/32	6 7/16
1/2	RX-16		15/16"	7/16	6 3/4
9/16	RX-18		1 1/32"	7/16	6 3/4
5/8	RX-20		1 1/8"	15/32	7 1/16
11/16	RX-22		1 13/64"	1/2	7 1/8
3/4	RX-24		1 9/32"	9/16	7 3/8
13/16	RX-26		1 3/8"	5/8	7 7/16
7/8	RX-28		1 7/16"	5/8	7 3/4
15/16	RX-30		1 33/64"	5/8	7 3/4
1	RX-32		1 19/32"	11/16	7 13/16
1 1/16	RX-34		1 43/64"	3/4	7 7/8
1 1/8	RX-36		1 49/64"	25/32	7 7/8
*1 3/16	RX-38		1 27/32"	13/16	7 29/32
*1 1/4	RX-40		1 15/16"	27/32	8
*1 3/8	RX-44		2 3/32"	29/32	10
*1 1/2	RX-48		2 17/64"	31/32	10 1/8
*1 5/8	RX-52		2 7/16"	1 1/32	10 1/4

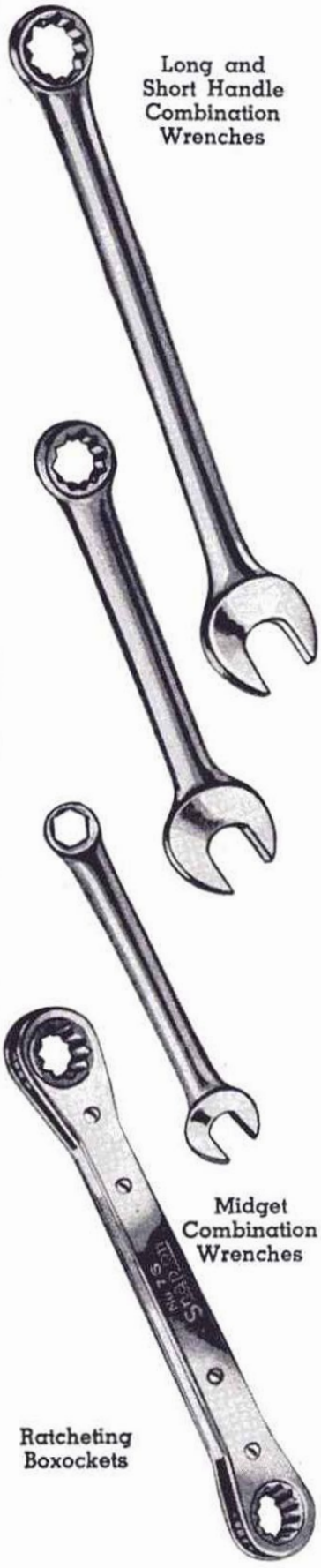
*These sizes made special to order.

Half Moon Boxocket Wrench

An ideal tool for use in getting at those hidden, around-the-corner, tough-to-get-at nuts such as starter nuts, manifold nuts, exhaust flange nuts, carburetor flange nuts, etc. The curve allows you to reach around obstacles and to handle those close-in jobs easily and quickly.

Wrench Size	Stock No.	Price	Handle Radius	Length Overall	Regular Series		Light Series	Cap Screws	Set Screws
					Unfinished Bolts	Nuts & Finished Bolts	Nuts & Castle Nuts		
5/8" & 5/8" 7/16" & 3/4"	CX1820 CX2024		2 3/8" 3 1/16"	6 1/2" 7 3/4"	7/16" & 3/8" 7/16" & 1/2"	3/8" & 5/16" 3/8" & 7/16"	7/16" & 3/8" 7/16" & 1/2"	7/16" & 3/8" 7/16" & 1/2"	5/8" & 9/16" 5/8" & 3/4"





COMBINATION WRENCHES

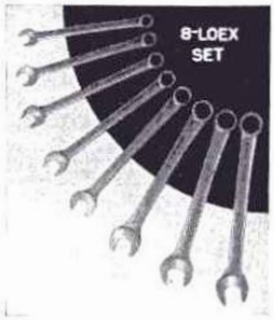
THE MOST in wrench service . . . in the *least space!* Here's a type of tool that should be in every tool kit . . . once you've used "Combination" wrenches you'll never want to be without them. The Boxocket end is mighty useful for breaking tight nuts loose or pulling them tighter—the Open End for fast turning. Boxocket heads are set at an angle to provide clearance over obstructions.

Long Handle Series

13-LOEX—COMBINATION WRENCH SET. Contains all tools listed below except OEX-29. Tools only.....

8-LOEX—COMBINATION WRENCH SET. Contains OEX-16-18-20-22-24-28-30-32 as illustrated. Tools only.....

8K-LOEX—SET. Above tools in C-82 Kit Bag.....

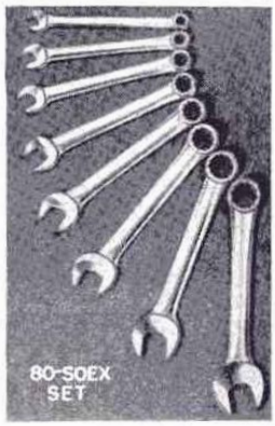


Size of Openings Both Ends	Stock No.	Price	Head Diameter		Overall Length	Regular Series		Light Series
			Box End	Open End		Unfinished Bolts	Nuts & Finished Bolts	Nuts & Castle Nuts
7/16"	OEX-14		45/64"	15/16"	7"		1/4"	1/4"
1/2"	OEX-16		3/4"	1 1/16"	7 5/8"	5/16"		5/16"
9/16"	OEX-18		51/64"	1 11/64"	8 5/32"	3/8"	5/16"	3/8"
5/8"	OEX-20		15/16"	1 9/32"	8 11/16"	7/16"	3/8"	7/16"
11/16"	OEX-22		1 1/64"	1 13/32"	9 13/16"			
3/4"	OEX-24		1 7/32"	1 33/64"	10 11/32"	1/2"	7/16"	1/2"
13/16"	OEX-26		1 5/16"	1 11/16"	10 11/32"		1/2"	
7/8"	OEX-28		1 17/64"	1 13/16"	10 7/8"	9/16"	9/16"	9/16"
29/32"	OEX-29		1 1/4"	1 3/8"	11 7/16"			
15/16"	OEX-30		1 23/64"	1 15/16"	11 7/16"	5/8"		5/8"
1"	OEX-32		1 5/16"	1 1/16"	11 31/32"		5/8"	
1 1/16"	OEX-34		1 13/32"	1 1/8"	12"			3/4"
1 1/8"	OEX-36		1 43/64"	1 1/4"	12 1/2"	3/4"	3/4"	
1 1/4"	OEX-40		1 27/32"	1 1/2"	13 3/8"			7/8"

Short Handle Series

8O-SOEX—COMBINATION WRENCH SET. Contains all tools listed below, as illustrated. Tools only.....

8OK-SOEX—SET. Above tools in C-80 Kit Bag.....



Size of Openings Both Ends	Stock No.	Price	Head Diameter		Overall Length	Regular Series		Light Series
			Box End	Open End		Unfinished Bolts	Nuts & Finished Bolts	Nuts & Castle Nuts
5/16"	OEX-100		1/2"	45/64"	5"			
3/8"	OEX-120		53/64"	13/16"	5 7/32"	1/4"		
7/16"	OEX-140		29/32"	15/16"	5 7/16"		1/4"	1/4"
1/2"	OEX-160		31/32"	1 1/16"	5 23/32"	5/16"		5/16"
5/8"	OEX-180		1 1/64"	1 11/64"	6"	3/8"	5/16"	3/8"
9/16"	OEX-200		1 1/16"	1 9/32"	6 1/16"	7/16"	3/8"	7/16"
11/16"	OEX-220		1 5/32"	1 13/32"	6 19/32"			
3/4"	OEX-240		1 5/16"	1 33/64"	6 47/64"	1/2"	7/16"	1/2"

Midget Combination Wrenches

Here's wrench convenience for handling those tricky little jobs where tiny nuts and bolts are used . . . these miniature tools speed up all those small parts jobs such as ignition, radio, dashboard work, etc. Both openings on each wrench are the same size. These tools are built to the most exacting standards to insure accurate grip on small nuts and are full chrome plated and polished.

OXI-40—Set of 4 Midget Combination Wrenches. Tools only.....
OXI-40K—Above set in C-52 Kit Bag.....

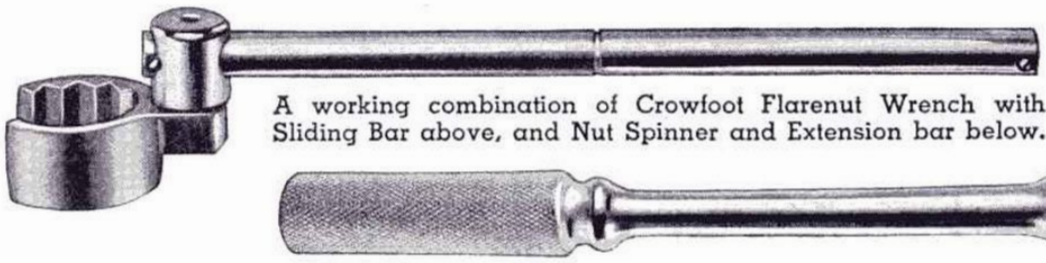


Wrench Size	Stock No.	Price	Head Diameter		Overall Length	Set Screws	Mach. Screw Nuts & Stove Bolt Nuts
			Box End	Open End			
1/4"	OXI-8		3/8"	17/64"	3 1/16"	1/4"	4
9/32"	OXI-9		27/64"	19/64"	3 1/64"		
5/16"	OXI-10		29/64"	21/64"	3 13/32"	5/16"	5 & 6
11/32"	OXI-11		1/2"	23/64"	3 11/16"		8

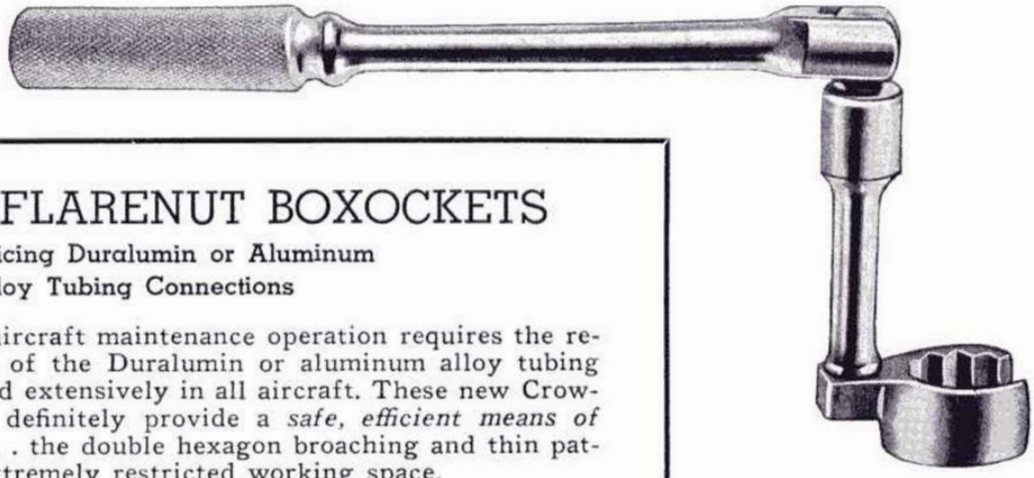
Ratcheting Boxocket Wrenches

When working space is limited you can speed up the job with these wrenches . . . most convenient and handy for manifold nuts, exhaust flange nuts, body bolts, etc. Sturdy yet thin, they reach into extremely close spaces. Polished chrome finish.

Size of Openings in Inches	Stock No.	Price	Wrench Thickness	Overall Length	Regular Series		Light Series
					Unfinished Bolts	Nuts & Finished Bolts	Nuts & Castle Nuts
1/2 & 9/16	75		13/32"	6 11/32"	3/16" & 5/8"	5/16"	3/16" & 3/8"
5/8 & 11/16	76		13/32"	7 15/32"	7/16"		7/16" & 3/8"
5/8 & 3/4	77		17/32"	7 15/16"	7/16" & 1/2"	3/8" & 7/16"	7/16" & 1/2"
3/4 & 7/8	79		1/2"	8 5/8"	9/16" & 1/2"	9/16" & 7/16"	9/16" & 1/2"



A working combination of Crowfoot Flarenut Wrench with Sliding Bar above, and Nut Spinner and Extension bar below.



CROWFOOT FLARENUT BOXOCKETS

For Servicing Duralumin or Aluminum Alloy Tubing Connections

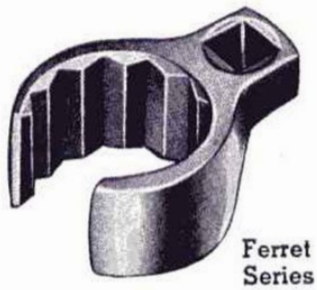
PRACTICALLY every aircraft maintenance operation requires the removal and replacement of the Duralumin or aluminum alloy tubing connections which are used extensively in all aircraft. These new Crowfoot Flarenut Wrenches definitely provide a *safe, efficient means of servicing these fittings* . . . the double hexagon broaching and thin pattern allow their use in extremely restricted working space.

These tools are designed for use with socket wrench handles in ¼", ⅜", and ½" square drives as shown in specifications given below. NOTE: Lightly constructed, these tools should not be used on jobs requiring a heavy pull . . . note approximate torque load for each size.

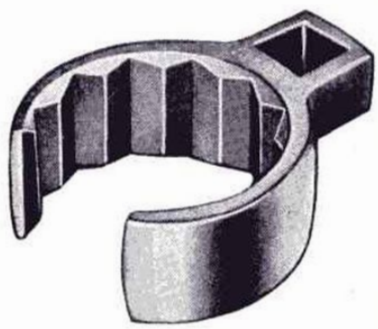
Stock No.	Wrench Size	Price	Square Drive	Outside Dia. of Head	Head Thickness	Width of Slot	Center to Center	Torque Load Inch Lbs. Max.
TRX-12	3/8"		1/4"	19/32"	15/32"	9/32"	1/2"	75
TRX-14	7/16"		1/4"	11/16"	17/32"	11/32"	9/16"	200
TRX-16	1/2"		1/4"	25/32"	17/32"	3/8"	39/64"	200
TRX-18	9/16"		1/4"	27/32"	17/32"	7/16"	41/64"	225
FRX-20	5/8"		3/8"	15/16"	11/16"	15/32"	47/64"	250
FRX-22	11/16"		3/8"	1 1/32"	11/16"	17/32"	25/32"	310
FRX-24	3/4"		3/8"	1 1/8"	23/32"	9/16"	53/64"	450
FRX-26	13/16"		3/8"	1 13/64"	23/32"	5/8"	7/8"	450
FRX-28	7/8"		3/8"	1 19/64"	3/4"	11/16"	15/16"	625
FRX-30	15/16"		3/8"	1 3/8"	3/4"	23/32"	31/32"	625
FRX-32	1"		3/8"	1 29/64"	25/32"	3/4"	1 1/64"	625
FRX-34	1 1/16"		3/8"	1 17/32"	25/32"	25/32"	1 3/64"	625
SRX-36	1 1/8"		1/2"	1 5/8"	7/8"	27/32"	1 5/32"	825
SRX-38	1 3/16"		1/2"	1 11/16"	7/8"	29/32"	1 3/16"	825
SRX-40	1 1/4"		1/2"	1 25/32"	7/8"	15/16"	1 15/64"	825
SRX-42	1 5/16"		1/2"	1 27/32"	7/8"	31/32"	1 17/64"	825
SRX-44	1 3/8"		1/2"	1 15/16"	15/16"	1 1/16"	1 5/16"	900
SRX-46	1 7/16"		1/2"	2"	15/16"	1 1/16"	1 11/32"	900
SRX-48	1 1/2"		1/2"	2 1/16"	15/16"	1 1/8"	1 3/8"	900
SRX-50	1 9/16"		1/2"	2 5/32"	15/16"	1 5/32"	1 27/64"	900
SRX-52	1 5/8"		1/2"	2 7/32"	15/16"	1 7/32"	1 29/64"	900
SRX-54	1 11/16"		1/2"	2 5/16"	1"	1 5/16"	1 33/64"	1100
SRX-56	1 3/4"		1/2"	2 3/8"	1"	1 5/16"	1 35/64"	1100
SRX-58	1 13/16"		1/2"	2 15/32"	1"	1 11/32"	1 19/32"	1150
SRX-60	1 7/8"		1/2"	2 9/16"	1 1/16"	1 3/8"	1 41/64"	1200
SRX-62	1 15/16"		1/2"	2 5/8"	1 1/16"	1 7/16"	1 43/64"	1200
SRX-64	2"		1/2"	2 23/32"	1 1/16"	1 9/16"	1 23/32"	1400
SRX-66	2 1/16"		1/2"	2 25/32"	1 1/8"	1 9/16"	1 3/4"	1400
SRX-68	2 1/8"		1/2"	2 7/8"	1 1/8"	1 9/16"	1 51/64"	1450
SRX-70	2 3/16"		1/2"	2 15/16"	1 1/8"	1 5/8"	1 53/64"	1450
SRX-72	2 1/4"		1/2"	3 1/32"	1 1/8"	1 11/16"	1 7/8"	1500
SRX-74	2 5/16"		1/2"	3 3/32"	1 3/16"	1 23/32"	1 29/32"	1550
SRX-76	2 3/8"		1/2"	3 3/16"	1 3/16"	1 13/16"	1 61/64"	1600
SRX-78	2 7/16"		1/2"	3 1/4"	1 3/16"	1 13/16"	1 63/64"	1650
SRX-80	2 1/2"		1/2"	3 11/32"	1 3/16"	1 7/8"	2 1/32"	1700
SRX-82	2 9/16"		1/2"	3 7/16"	1 1/4"	1 7/8"	2 3/32"	1750
SRX-84	2 5/8"		1/2"	3 1/2"	1 1/4"	2 1/16"	2 1/8"	1800
SRX-86	2 11/16"		1/2"	3 9/16"	1 1/4"	2 1/16"	2 5/32"	1800
SRX-88	2 3/4"		1/2"	3 21/32"	1 1/4"	2 1/16"	2 13/64"	1850
SRX-90	2 13/16"		1/2"	3 23/32"	1 5/16"	2 3/32"	2 15/64"	1900
SRX-94	2 15/16"		1/2"	3 7/8"	1 5/16"	2 5/32"	2 5/16"	1950
SRX-100	3 1/8"		1/2"	4 1/8"	1 5/16"	2 5/16"	2 7/16"	2000



Midget Series
¼" Square Drive

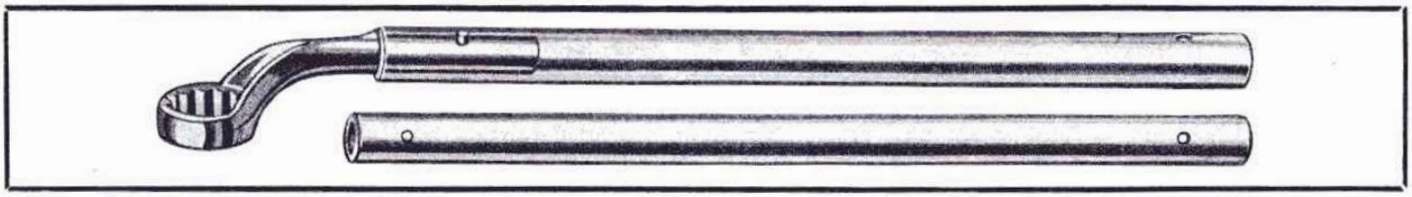


Ferret Series
⅜" Square Drive



Master Series
½" Square Drive

Boxocket Wrenches



HEAVY DUTY OFFSET BOXOCKETS

REDESIGNED to give even greater strength than our former line of Heavy Duty Boxockets, these tools give you safe, powerful leverage to turn the tightest of those larger nuts and bolts. The Boxocket openings completely encircle the nut, eliminating the danger of the wrench slipping, as an open end wrench can and sometimes does, so that the operator can "lay into the job" with complete confidence in his own safety. The compact Boxocket head will also reach into places where other types of wrench equipment cannot possibly be used, and the double hexagon broaching gives the advantage of a short turning arc where obstructions restrict free swinging of the wrench handle. The complete hexagon opening grips the nut or bolt head on all sides and equally distributes the applied torque to the job, thus utilizing every inch of muscular leverage to the utmost advantage.



These twenty-two Boxockets are used with the four tubular handles also listed below. Each wrench head has a handle stop and a locking button which engages a lock hole in the handle. Deliberate action is necessary to unlock the combination, and the locked wrench and handle provide the utmost strength and safety.

Stock No.	Size of Opening in Inches	Price	Head Thickness	Head Diam.	Height of Offset	For Handle No.	From Bolt Center: Length with Handle	From Bolt Center: Length without Handle
X-340	1 5/16		5/8"	1 43/64"	15/16"	18"	21 3/4"	7"
X-360	1 3/8		11/16"	1 3/4"	1"	18"	21 3/4"	7"
X-400	1 3/4		3/4"	1 59/64"	1 1/16"	18"	21 3/4"	7"
X-420	1 5/16		13/16"	2"	1 1/4"	24"	29 1/4"	9 1/2"
X-440	1 3/8		7/8"	2 3/32"	1 5/16"	24"	29 1/4"	9 1/2"
X-460	1 7/16		7/8"	2 11/64"	1 1/4"	24"	29 1/4"	9 1/2"
X-480	1 1/2		15/16"	2 1/4"	1 5/16"	24"	29 1/4"	9 1/2"
X-500	1 9/16		15/16"	2 13/32"	1 5/16"	24"	29 1/4"	9 1/2"
X-520	1 5/8		1"	2 27/64"	1 3/8"	24"	29 1/4"	9 1/2"
X-540	1 11/16		1 1/16"	2 1/2"	1 7/16"	30"	35 3/4"	12"
X-560	1 3/4		1 1/16"	2 19/32"	1 1/2"	30"	35 3/4"	12"
X-580	1 13/16		1 1/8"	2 43/64"	1 9/16"	30"	35 3/4"	12"
X-600	1 7/8		1 1/8"	2 3/4"	1 5/8"	30"	35 3/4"	12"
X-640	2		1 1/4"	2 59/64"	1 3/4"	30"	35 3/4"	12"
X-700	2 3/16		1 5/16"	3 11/64"	1 7/8"	30"	35 3/4"	12"
X-720	2 1/4		1 5/16"	3 1/4"	1 7/8"	36"	42"	12"
X-760	2 3/8		1 3/8"	3 23/64"	2"	36"	42"	12"
X-820	2 5/16		1 1/2"	3 43/64"	2 1/4"	36"	42"	12"
X-840	2 5/8		1 1/2"	3 3/4"	2 1/4"	36"	42"	12"
X-880	2 3/4		1 5/8"	3 59/64"	2 1/2"	36"	42"	12"
X-940	2 15/16		1 11/16"	4 11/64"	2 5/8"	36"	42"	12"
X-1000	3 1/8		1 3/4"	4 31/64"	2 3/4"	36"	42"	12"

Handles for Heavy Duty Boxockets

Handle No.	Handle Length	Length Overall Ass'bld.	Outside Dia.	Inside Dia.	Price Each
18	18"	24"	7/8"	11/16"	
24	24"	35"	1 1/16"	7/8"	
30	30"	41"	1 5/16"	1"	
36	36"	52 1/2"	1 5/16"	1 1/8"	

SLEDGE-TYPE BOXOCKET WRENCHES



Sledge-Type Boxocket Sizes

Stock No.	Wrench Size	Wrench Head: Thickness	Wrench Head: Diameter	Length	Price
X-164	2"	1 5/8"	3 1/4"	15 5/8"	
X-166	2 1/16"	1 5/8"	3 1/4"	15 5/8"	
X-170	2 3/16"	1 7/8"	3 5/8"	15 3/4"	
X-172	2 1/4"	1 7/8"	3 5/8"	15 3/4"	
X-176	2 3/8"	1 7/8"	3 5/8"	15 3/4"	
X-178	2 7/16"	2"	4"	16"	
X-182	2 9/16"	2"	4"	16"	
X-184	2 5/8"	2"	4"	16"	
X-188	2 3/4"	2 1/4"	4 17/64"	16 1/4"	
X-190	2 13/16"	2 1/4"	4 17/64"	16 1/4"	
X-194	2 15/16"	2 1/2"	4 51/64"	17"	
X-196	3"	2 1/2"	4 51/64"	17"	
X-1100	3 1/8"	2 1/2"	4 51/64"	17"	
X-1108	3 3/8"	2 3/4"	5 29/64"	18"	
X-1112	3 1/2"	2 3/4"	5 29/64"	18"	
X-1120	3 3/4"	3"	5 7/8"	19 7/8"	
X-1124	3 7/8"	3"	5 7/8"	19 7/8"	
X-1132	4 1/8"	3 1/4"	6 3/8"	20"	
X-1136	4 1/4"	3 1/4"	6 3/8"	20"	
X-1144	4 1/2"	3 1/2"	6 3/4"	20"	
X-1148	4 5/8"	3 1/2"	6 3/4"	20"	

These are the strongest and most powerful wrenches in the Snap-on line—made to handle those particularly tough jobs where large bolts must be tightened to the last possible degree. Power plants, engineering construction work, oil fields, railroads, marine shops, and other fields where the larger bolt sizes are used will find these wrenches the answer to many tough bolt tightening problems.

The openings are single broached to give the utmost possible strength and the shaft is shaped to distribute the shock of the hammer blow over the full depth of the wrench walls. Sledge hammer blows on the wrench anvil will drive the bolts tight on the heaviest of machinery.

To clear obstructions or reach "buried" nuts, certain of these wrenches can be used with companion single broached hexagon sockets listed below. Boxockets and sockets are produced from special grade alloy steel hardened and tempered to stand up under this hard usage.



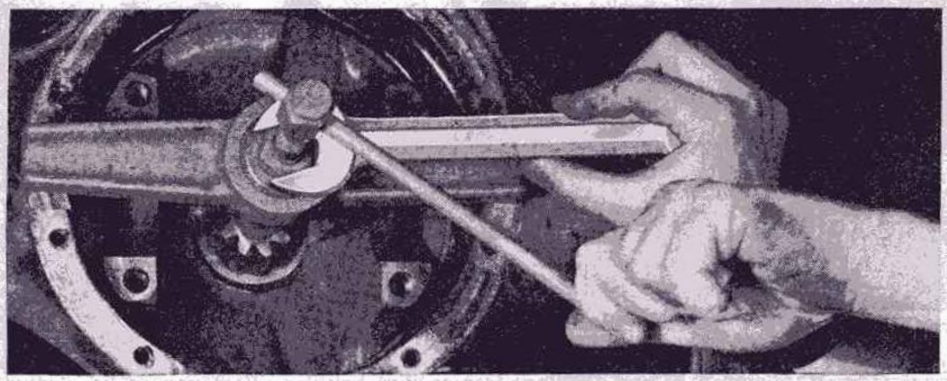
Tightening hold-down bolts in a municipal water supply station with a Snap-on sledge-type boxocket to eliminate vibration and maintain efficient operation.

Sledge-Type Socket Sizes



These sockets are designed expressly for use with sledge-type boxockets and have extra thick walls to withstand the punishment.

Part No	Wrench Size Nominal	Outside Diameter	Overall Length	Price
H-640	2"	3 1/16"	3 3/4"	
H-760	2 3/8"	3 1/2"	4 1/4"	
H-820	2 9/16"	3 3/4"	4 1/2"	
H-880	2 3/4"	4 1/8"	5"	
H-940	2 15/16"	4 5/16"	5 1/4"	
H-1000	3 1/8"	4 5/8"	5 1/2"	
H-1120	3 1/2"	5 1/16"	6"	
H-1240	3 7/8"	5 5/8"	6 1/2"	
H-1360	4 1/4"	6 1/16"	7"	
H-1480	4 5/8"	6 1/2"	7 1/2"	



Wrench opening lays at 15° from the handle



"Supreme" Open End Wrenches

Blue-Point

"Supreme" OPEN END WRENCHES

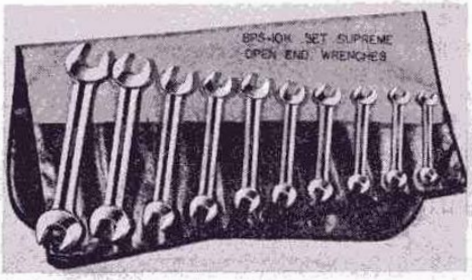
An outstanding Wrench Development

Design Patent Applied For

BUILT to give you the very best in end wrench design and construction . . . *Thinner Heads . . . Narrower Jaws . . . Greater Strength . . . Lighter Weight . . . Balanced Design . . . Sure Grip Handle* . . . advantages which help speed assembly and service operations.

Made from the finest alloy, high carbon steel, these tools possess qualities of strength, toughness, and fatigue resistance under the strain of hard usage that cannot be obtained in ordinary wrenches of comparable size and weight.

Buy Blue-Point "Supreme" Open Ends and you buy the *finest tools of their kind*—wrenches that will stand up under the toughest working conditions and give you years of satisfactory nut turning.



BPS-10—SUPREME SET. 10 wrenches, S-1214, S-1416, S-1618, S-1820, S-1922, S-2024, S-2526, S-2428, S-3032, S-3436. Tools only .....

BPS-10K—SET. In C-101 Kit Bag .....

BPS-8—SUPREME SET. 8 wrenches, S-1214, S-1416, S-1618, S-1820, S-1922, S-2024, S-2526, S-2428. Tools only .....

BPS-8K—SET. Above set in C-80 Kit Bag .

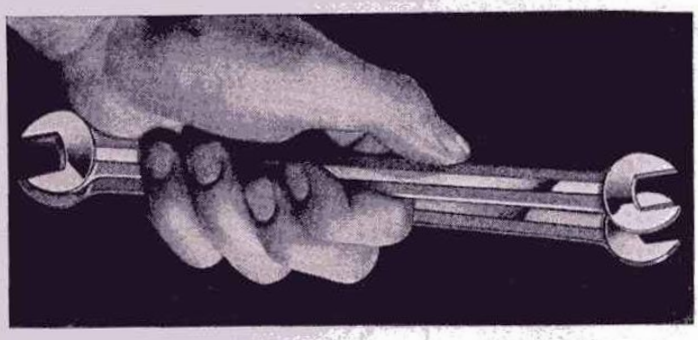
BPS-6—SUPREME SET. 6 wrenches, S-1214, S-1618, S-1922, S-2024, S-2830, S-2526. Tools only .....

BPS-6K—SET. Above set in C-62 Kit Bag

Size of Openings in Inches	Stock No.	Price	Head Thickness, In.	Overall Length, Inches	Regular Series: Unfinished Bolts	Regular Series: Nuts & Finished Bolts	Light Series: Nuts & Castle Nuts
1/4 & 5/16	S-810		13/64"	4 1/2			
5/16 & 3/8	S-1012		7/32"	4 3/4	1/4"		
3/8 & 7/16	S-1214		15/64"	5 1/8	1/4"	1/4"	1/4"
7/16 & 1/2	S-1416		1/4"	5 5/16	5/16"	1/4"	1/4" & 5/16"
1/2 & 9/16	S-1618		1/4"	6	5/16" & 3/8"	5/16"	5/16" & 3/8"
9/16 & 5/8	S-1820		19/64"	6 7/16	3/8" & 7/16"	5/16 & 3/8"	3/8" & 7/16"
19/32 & 11/16	S-1922		19/64"	6 7/8			
5/8 & 11/16	S-2022		5/16"	7 3/8	7/16"	3/8"	7/16"
5/8 & 3/4	S-2024		5/16"	7 3/4	7/16" & 1/2"	3/8" & 7/16"	7/16" & 1/2"
11/16 & 3/4	S-2224		21/64"	8 3/16	1/2"	7/16"	1/2"
11/16 & 13/16	S-2225		21/64"	8 3/16			
25/32 & 13/16	S-2526		11/32"	8 5/8		1/2"	
3/4 & 13/16	S-2426		11/32"	8 5/8	1/2"	7/16" & 1/2"	1/2"
3/4 & 7/8	S-2428		3/8"	9 1/16	1/2" & 9/16"	7/16" & 9/16"	1/2" & 9/16"
7/8 & 15/16	S-2830		13/32"	10 3/8	9/16" & 5/8"	9/16"	9/16" & 5/8"
15/16 & 1	S-3032		13/32"	10 1/2	5/8"	5/8"	5/8"
15/16 & 1 1/16	S-3034		13/32"	10 1/2	5/8"		5/8" & 3/4"
1 & 1 1/8	S-3236		29/64"	11 1/2	3/4"	5/8" & 3/4"	
1 1/16 & 1 1/8	S-3436		29/64"	11 1/2	3/4"	3/4"	3/4"
1 1/16 & 1 1/4	S-3440		1/2"	13			3/4" & 7/8"
1 1/8 & 1 1/4	S-3640		1/2"	13	3/4"	3/4"	7/8"
1 1/8 & 1 5/16	S-3642		1/2"	13	3/4" & 7/8"	3/4" & 7/8"	
1 1/4 & 1 5/16	S-4042		17/32"	14	7/8"	7/8"	7/8"
1 3/8 & 1 1/2	S-4448		17/32"	14	1"	1"	
1 7/16 & 1 5/8	S-4652		9/16"	15			1" & 1 1/8"

For Twenty-five Years the Standard of Highest Quality

Tappet Wrenches



Blue-Point "Supreme" TAPPET WRENCHES

Design Patent Applied For

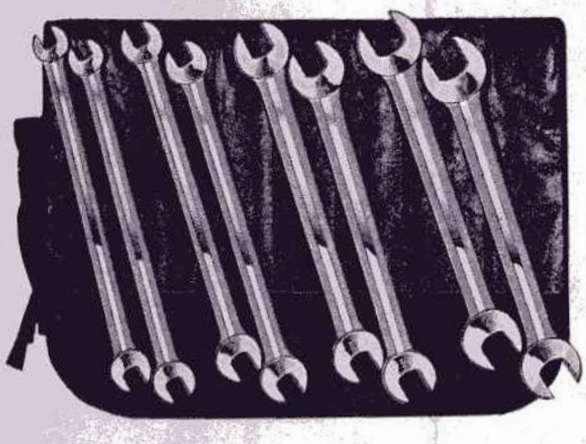
Many Outstanding Improvements

SLENDERIZED to the n'th degree, Blue-Point "Supreme" Tappet Wrenches bring speed and convenience to your tappet adjusting operations. Disc-thin, pear shaped jaws easily get into those close quarters around the tappet adjusting screws, tappets and lock nuts, on motors of modern design . . . and the long rapier-slim handles allow you to keep your hands clear of hot motors—prevent unpleasant burns. Both heads are set at an angle from the handle allowing better adaptability of the tools.

These wrenches are extremely light and perfectly balanced . . . superiorities which are appreciated on the job when usually two wrenches are worked like scissors in one hand and a third wrench is used in the other hand.

Along with their light weight design Blue-Point "Supreme" Tappet Wrenches give you the highest qualities of strength and durability . . . the high carbon, special alloy steel used especially for these tools possess degrees of strength not obtainable in ordinary tappet wrenches of similar size. You can't buy any other wrench that can give you greater utility or finer appearance.

Stock Number	Size of Openings	Head Thickness	Overall Length
LTA-1416	7/16" & 1/2"	11/64"	9 1/2"
LTA-1618	1/2" & 9/16"	3/16"	9 1/2"
LTA-2022	5/8" & 11/16"	3/16"	9 1/2"
LTA-2428	3/4" & 7/8"	13/64"	9 1/2"



"Supreme" Tappet Wrench Sets

LTA-8-TAPPET WRENCH SET. 8 wrenches, 2 each of the four tools listed and shown at left. Tools only.....

LTA-8K—SET. Above set in C-81 Kit Bag.....

LTA-6—TAPPET WRENCH SET. 6 wrenches, 2 each of LTA-1618, LTA-2022, and LTA-2428. Tools only.....

LTA-6K—SET. Above set in C-81 Kit Bag .....

Long Tappet Wrenches



A single end type of Tappet Wrench with exceptionally long, flat handles. These wrenches are mighty fine for adjusting work when there are hot manifolds to work around. Note the tapered shape of the handle which provides a better hand grip.

No.	Opening	Head Thickness	Length	Price
CT-14	7/16"	5/16"	12"	

Heavy Duty Tappet Wrenches



No.	Size of Openings	Head Thickness	Overall Length	Price
XL-140	7/16"	9/32"	14"	
XL-166	1/2"	3/16"	14"	
XL-167	1/2"	7/32"	14"	
XL-168	1/2"	1/4"	14"	
XL-169	1/2"	9/32"	14"	
XL-186	9/16"	3/16"	14"	
XL-187	9/16"	7/32"	14"	
XL-188	9/16"	1/4"	14"	
XL-189	9/16"	9/32"	14"	

Note: These Heavy Duty tappet wrenches can also be furnished on special order in 5/8", and 11/16" sizes. Prices upon request.

WHITWORTH WRENCHES

We can supply wrenches accurately broached to Whitworth standards in full ranges of practically all of our standard sockets, boxocket, combination, open-end, and tappet wrench series. If your production or service work requires Whitworth standard wrenches, write for special catalog sheets listing Snap-on's complete available Whitworth line.

Tappet Holding Wrench



Here's that third hand you've needed for tappet adjusting work. Made in 1/2" size only to take the great majority of tappets. The curved jaws are slipped over the adjacent tappet with the 1/2" opening in position on the one which is to be held. The locking plunger holds the tool in position.

TA-16—TAPPET HOLDING WRENCH.....



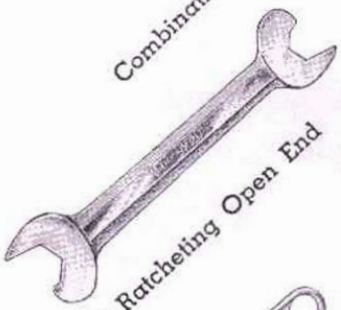
Short Open End Wrenches



Ignition Wrenches



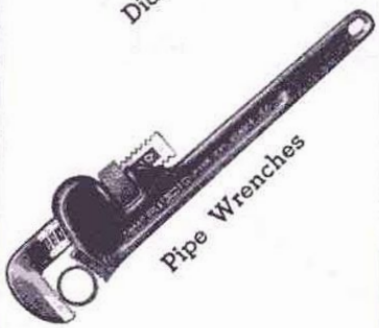
Midget Combination Wrenches



RS-1618 Ratcheting Open End



Diamalloy Wrenches



Pipe Wrenches

IGNITION WRENCHES



DON'T drive tacks with a sledge hammer! ... Midget wrenches speed up every small parts job ... make easy work of all those tricky ignition carburetor, radio, and electrical jobs where it takes tiny, short handled tools to do the trick. Made in pairs with two different sizes on each wrench ... each size duplicated on a separate handle at a different angle.

C-10 SET—One each of all sizes. Tools only.....(S)

C-10K SET—Above set in C-100 Kit Bag .....(S)

C-8 SET—One each of all sizes except C-1719 and C-1917. Tools only ....

C-8K SET—Above set in C-100 Kit Bag. .....

Size		Stock No.	Price	Head Thickness	Overall Length	Regular Series		Light Series
Straight End	Angle End					Unfinished Bolts	Nuts & Finished Bolts	Nuts & Castle Nuts
7/32"	13/64"	C-1415		8/32"	2 1/32"	.....	.....	.....
15/64"	7/32"	C-1514		8/32"	2 1/32"	.....	.....	.....
1/4"	9/32"	C-1618		7/64"	2 3/4"	.....	.....	.....
9/32"	1/4"	C-1816		7/64"	2 3/4"	.....	.....	.....
17/64"	19/64"	C-1719		7/64"	3"	.....	.....	.....
19/64"	17/64"	C-1917		7/64"	3"	.....	.....	.....
5/16"	11/32"	C-2022		1/8"	3 1/16"	.....	.....	.....
11/32"	5/16"	C-2220		1/8"	3 1/16"	.....	.....	.....
3/8"	7/16"	C-2428		1/8"	3 9/16"	1/4" ...	... 1/4"	... 1/4"
7/16"	3/8"	C-2824		1/8"	3 9/16"	... 1/4"	1/4" ...	1/4" ...

Short Open End Wrenches

These small Open End Wrenches will prove invaluable wherever nuts 3/16" to 7/16" sizes are encountered, and especially so where working space is extremely limited.
J-5 SET—Five wrenches listed below. Tools only.....
J-5K SET—Complete in C-52 Kit Bag.....



Sizes of Openings in Inches	Stock No.	Price	Head Thickness	Overall Length	Regular Series		Light Series
					Unfinished Bolts	Nuts & Finished Bolts	Nuts & Castle Nuts
3/16 & 7/32	J-1214		7/64"	2 3/4"	.....	.....	.....
1/4 & 5/16	J-1620		1/8"	3 7/32"	.....	.....	.....
5/16 & 11/32	J-2022		9/16"	3 3/16"	.....	.....	.....
3/8 & 7/16	J-2428		11/64"	3 29/32"	1/4" ...	... 1/4"	... 1/4"
1/2 & 9/16	J-3236		3/16"	4 7/32"	5/16" & 3/8"	... 5/16"	5/16" & 3/8"

Midget Combination Wrenches

Excellent for awkward little jobs where small nuts defy you and socket wrenches won't work ... an Open End Wrench at one end—a Boxocket at the other ... both openings on each wrench the same size. Buy the set complete and be ready with the right tools to adjust those tricky jobs in a hurry.

OXI-40—Set of four Midget Combination Wrenches. Tools only.....

OXI-40K—Above set in C-52 Kit Bag.....

Stock No.	Wrench Size	Head Diameter		Overall Length	Price
		Box End	Open End		
OXI-8	1/4"	3/8"	17/32"	3 1/16"	
OXI-9	9/32"	27/64"	19/32"	3 17/64"	
OXI-10	5/16"	29/64"	21/32"	3 15/32"	
OXI-11	11/32"	1/2"	23/32"	3 11/16"	

Ratcheting Open End Wrench

Here's an Open End Wrench that gives you speed as well as open end convenience for such jobs as manifold and carburetor work, certain phases of brake adjustments, and many other operations. It will run a nut all the way down without once removing the wrench from the nut and actually will work in less space than a conventional open end wrench. Slim, neat-appearing, and well balanced, it is the same high quality as Snap-on "Supreme" Open Ends. It can be used on nuts that no other type of wrench will reach ... just try it and see how quickly and easily it turns the nut.
RS-1618—1/2" and 9/16" Ratcheting Open End Wrench, 6" long. Each.....

Adjustable Wrenches

Extra Strong ... Extra Thin

Remarkable strength ... extra thin jaws ... light weight—Blue-Point Adjustable Wrenches give you all three. Through the use of new alloy steels of unusual tensile strength we are able to build you a wrench that for working convenience and durability cannot be beaten. The thin head gets into extremely close working places ... accurately machined and specially tempered jaws operate freely with practically no danger of binding, sticking, or spreading.

No.	Size	Capacity	Head Thickness	Weight	Price
D-74	4"	1/2"	5/16"	2 oz.	
D-76	6"	3/4"	13/32"	5 oz.	
D-78	8"	15/16"	15/32"	8 oz.	
D-710	10"	1 1/8"	9/16"	13 oz.	
D-712	12"	1 5/16"	3/4"	24 oz.	
D-715	15"	1 11/16"	31/32"	49 oz.	

Pipe Wrenches

The housing of these wrenches is guaranteed against breakage or distortion. Powerful I-beam handle. Grip and hold perfectly under the stiffest pull but you can't lock them on a pipe. Jaws are replaceable.

No.	Size	Weight	Price
6	6"	7 oz.	
8	8"	15 oz.	
10	10"	1 3/4 lbs.	
14	14"	3 3/4 lbs.	
18	18"	5 lbs.	
24	24"	8 1/2 lbs.	
36	36"	16 1/2 lbs.	

TIRE AND LUBRICATION TOOLS

Blue-Point Rim Wrenches

POWERFUL 4-way speed wrenches adapted for lug nuts and tire carrier nuts or bolts on practically all makes of cars and trucks. Socket ends broached extra deep in order to clear protruding bolt ends.

★**No. 400—RIM WRENCH**—5/8", 13/16", 3/4", 7/8" openings. Each arm is 8" long. Highly polished finish. Each.....

★**No. 404-A—TRUCK ARM WRENCH**—1 1/4", 1 3/8", 1 1/16", 1 3/16" openings. Each arm is 8 1/2" long. Highly polished finish. Each.....

Blue-Point Tire Hammer

A sturdy tool that will stand up under a lot of tough usage . . . head and handle a one-piece drop forging. Second growth hardwood handle grips on each side give a sound, comfortable grip. An ideal tool for all garages and service stations. Weight, 3 1/2 lbs.

BH-40 BLUE-POINT TIRE HAMMER. Each.....

Blue-Point Tire Tool

When you've got to get a tire off in a hurry! . . . that's the time you'll appreciate having a couple of these tools handy. Just the right length, width, and thickness to do a quicker, easier job. Made of very tough-tempered forged steel . . . rounded edges . . . blades tapered. 16" long, 3/8" thick, 15/16" wide.

BH-250 BLUE-POINT TIRE TOOL. Each.....

Blue-Point Rim Tool

Here's a tool that really does the job on split rims and rim lock rings as used on older cars and practically all trucks. It's a husky tool, 19" long, and will give years of satisfactory service.

★**BH-265—BLUE-POINT RIM TOOL.** Each.....

Vise-Grip Wrenches

Because they will do more things—*Faster and Easier* than any other type of tool—these "Vise-Grip" wrenches are considered indispensable by thousands of mechanics. A "Vise-Grip" is actually a vise, clamp, pliers, pipe wrench, open end wrench, locking wrench, toggle press—all in one!



The "Vise-Grip" holds anything . . . round, square, or otherwise. It works in close quarters, at any angle . . . adjusts to a ratchet-like action. The double lever action locks its strong alloy steel jaws to the work with a ton pressure—because it does not slip, it will not damage bolts or nuts. "Vise-Grip" wrenches are light, trim, handsome . . . made of fine alloy steel . . . nickel plated finish.



GA-27— 7" VISE-GRIP WRENCH. Each..

GA-28—10" VISE-GRIP WRENCH. Each..

Grease Fitting Tools

Here's a couple of hot numbers for the greasing department . . . they remove broken or worn out grease fittings . . . rethread the holes . . . replace new fittings—either Zerk or Alemite. One tool does the complete job—they're wonderful time-savers and tools no mechanic should be without. The GA-22 is for standard size fittings . . . the GA-22-A for the newer, so-called "Midget" fittings.

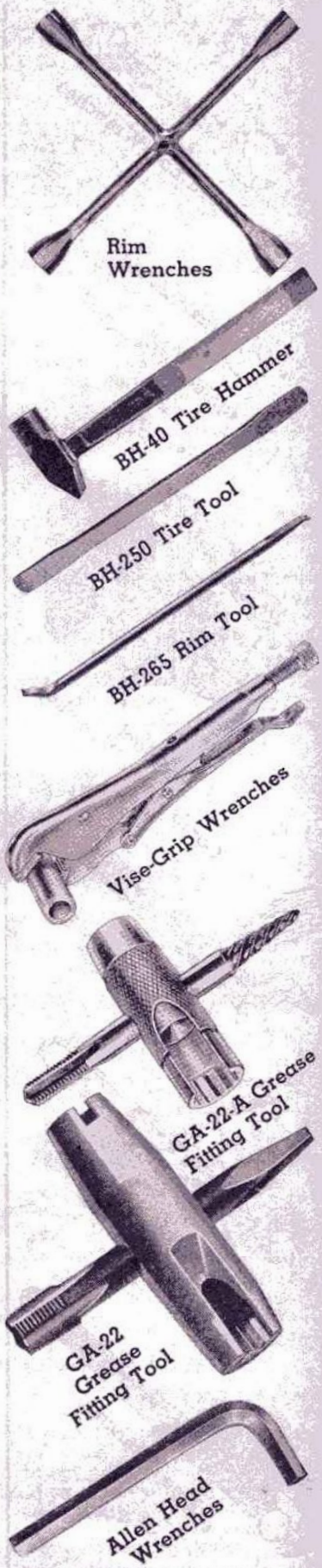
★**GA-22—STANDARD GREASE FITTING TOOL.** Each.....

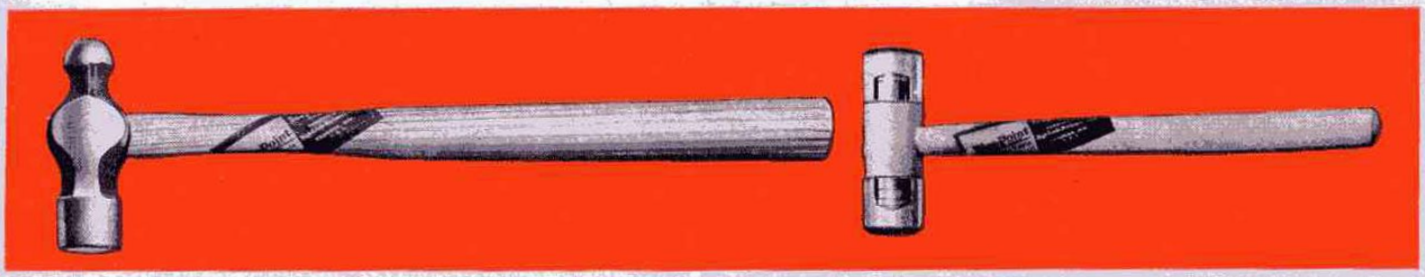
★**GA-22-A—MIDGET GREASE FITTING TOOL.** Each.....

Allen Head Wrenches

Stock No.	Size	Price	Stock No.	Size	Price
★AW-1 1/2	3/64"		AW-8	1/4"	
AW-2	1/16"		AW-10	5/16"	
AW-2 1/2	5/64"		AW-12	3/8"	
AW-3	3/32"		AW-16	1/2"	
AW-4	1/8"		AW-18	9/16"	
AW-5	5/32"		AW-20	5/8"	
AW-6	3/16"		AW-24	3/4"	
AW-7	7/32"				

Made in the most generally used sizes of Allen Head Screws . . . it's much quicker and easier to turn this type of screw with one of these wrenches than it is to use a screw driver or other makeshift method. Get yourself the complete series and be ready for any job of this type that may happen along.





Ball Peen Hammers

QUALITY from start to finish, these sturdy, well balanced hammers are correctly designed, balanced, and heat treated to make them the most serviceable for all around work. Drop forged from high grade alloy steel, they will withstand long, hard use under all conditions. Handsome blued finish. The handles are made of selected second growth, well seasoned hickory, carefully turned so that the grain runs full length of handle to give maximum strength and resiliency, securely anchored in the heads. Made in all sizes listed below.

No.	Weight	Price	No.	Weight	Price
V-7/0	2 Oz.		V-0	1 Lbs.	
V-5/0	4 Oz.		V-1	1¼ Lbs.	
V-4/0	6 Oz.		V-2	1½ Lbs.	
V-3/0	8 Oz.		V-4	2 Lbs.	
V-2/0	12 Oz.		V-6	2½ Lbs.	

★**Extra Handles** for any size hammer. Highest quality obtainable and conforming to Government specifications. When ordering handles, order by hammer number followed by letter H, i.e., No. V-7/OH. Each.....

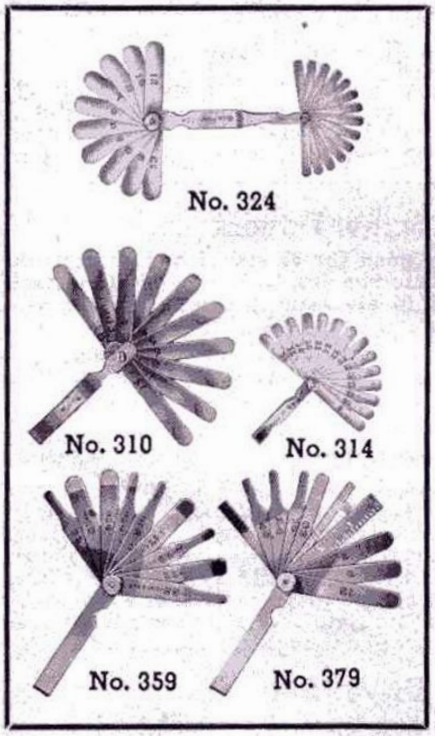
Cellulose Tip Hammers

SOFT tip hammers for fitting piston pins, wrist pins, gears, bearings, etc., or for tapping valves in blocks; ignition and distributor, or any other kind of work where very precision finished or delicate parts would be injured by hard metal hammers.

The tips are tough plastic and will stand a lot of pounding without undue marring of the faces . . . tips are easily replaced when necessary. Three sizes are available to take a wide range of work. Center part of head is enameled steel.

Hammers Complete			Extra Tips			Extra Handles	
Stock No.	Weight	Price	Stock No.	Tip Dia.	Price Each	Stock No.	Price
★90-PH	¼ lb.		★90-PH-2	⅞"		★90-PH-3	
★91-PH	½ lb.		★91-PH-2	1¼"		★91-PH-3	
★92-PH	1 lb.		★92-PH-2	1⅝"		★92-PH-3	
★693	2 lbs.		★693-A	1⅝"		★693-H	

Note: Hammer handles are not guaranteed.



Extra Blades

★Extra 3½" Blades in regular thicknesses. Each .....

★Extra 2½" Blades in regular thicknesses. Each .....

★Extra 1¾" Fingers in regular thicknesses. Each .....

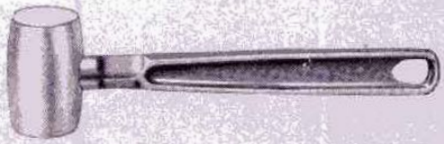
★Special thicknesses of blades or fingers. Each .....

Note: Blade measurements are given in all cases for overall length.

Lead Hammer

A most useful and essential tool for those many jobs where heavy hammer blows are required, but where steel hammers would cause damage. This 3 lb., soft lead hammer is molded onto a sturdy metal handle designed to provide a firm hand grip.

LH-3 LEAD HAMMER. Each.....



Blue-Point Feeler Gauges

Blades of tested accuracy, finest imported ultra superior Swedish tempered steel. Gauges equipped with knurled nut permitting user to slide out the required blade and lock it in position, leaving other blades locked in handle.

★**No. 324 COMBINATION GAUGE**—Ten fine blades for tappet work, etc., and fourteen narrow fingers for ignition work. Blades 2½" overall length in thicknesses: .003, .004, .005, .006, .007, .008, .010, .012, .013, and .015. Fingers 1¾" overall length in thicknesses: .008, .010, .012, .013, .015, .018, .020, .022, .024, .025, .028, .030, .032, .035. Each.....

★**No. 310 TEN BLADE GAUGE**—Blades 3½" overall length in following thicknesses: .003, .004, .005, .006, .007, .008, .010, .012, .013, and .015". Each..

★**No. 314 IGN & GAP GAUGE**—Fourteen of the most necessary finger thicknesses. Fingers 1¾" overall length in the following thicknesses: .008, .010, .012, .013, .015, .018, .020, .022, .024, .025, .028, .030, .032, .035. Each.....

★**No. 379 SPECIAL CHEVROLET FEELER GAUGE**—Contains four ½" wide blades—.006, .008, .013 and .032 thicknesses; three ¼" fingers—.018, .024 and .040 thicknesses. Also a carburetor float depth gauge, tungsten file and 3" scale. Each.....

★**No. 359 FORD "GO AND NO-GO" FEELER GAUGE**—.025 for spark plugs on models "B" and V-8, .022 for valves on model "B," .022 with narrow tip for distributor on models "A" and "B," .017 for valves on model "A," .016 for V-8 distributor, .014 with narrow end for V-8 distributor, .014 for all valves on V-8, .013 for valves on models "A" and "B," and .035 for spark plugs on model "A." Each.....

Wire Spark Plug Feeler Gauges

★**No. 308-W—SPARK PLUG GAUGE.** Especially designed for easy checking of spark plug gaps . . . much better for this job than a flat blade type tool. Contains 8 sizes—.022, .025, .027, .028, .030, .032, .035, .040. Ends of the wires are turned at 90° so that electrodes which are recessed below the shell may be set without trouble. Each.....

★**308-AW—AIRCRAFT SPARK PLUG GAUGE.** Contains sizes .010, .012, .015, .018, .020, .022, .025 and .030.

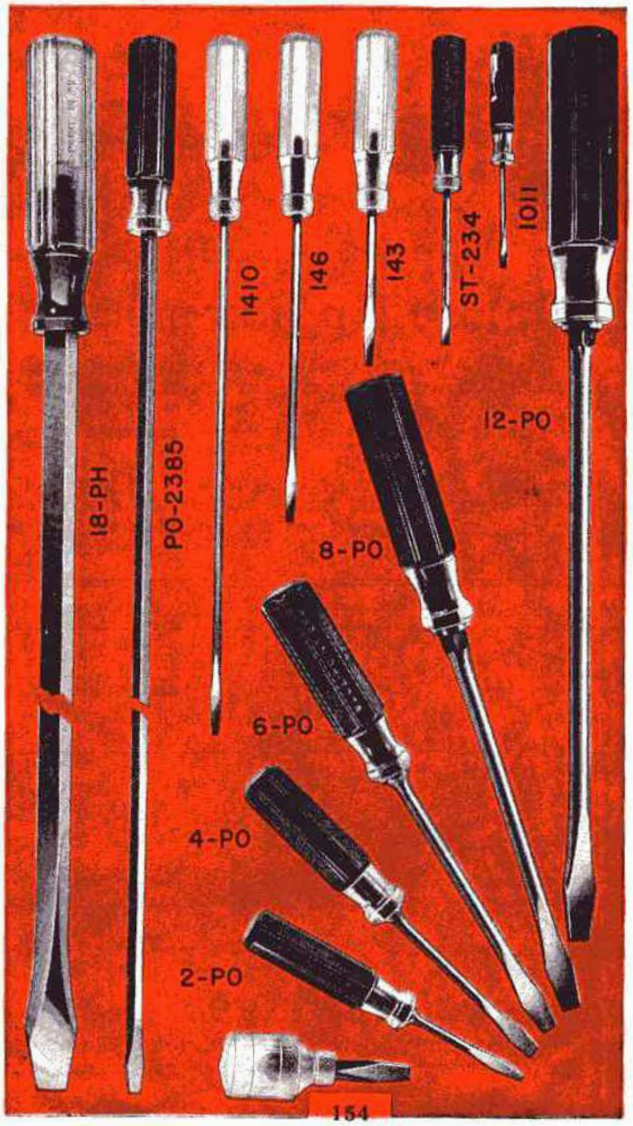
308-WH Handle only. Each.....

★**Extra Wires** in above sizes. Each.....

★**308-W20—.020 Feeler Wire.** This size not included with 308-W Tool, but can be added if desired. Each.....



For Twenty-five Years the Standard of Highest Quality



Octo-Grip Screw Drivers

TRADE MARK

Registered U. S. Patent Office

THE finest screw drivers that the combined skill of designers, metallurgists, and fine craftsmen can produce . . . *better looking —more practical* . . . that's what top-notch mechanics are saying about the new Blue-Point "Octo-Grip" drivers.

9 Important Features

1. Handles made of tough black and amber plastic . . . proved under actual working conditions to be of the finest type of screw driver handle—practically unbreakable—shockproof.
2. Blades made of nickel molybdenum alloy steel . . . entire bar electric heat treated under precision automatic control to develop maximum combined strength and toughness.
3. Handles are 8-sided with a light, rounded ridge at each corner . . . they will not roll when laid down.
4. Handles offer the best turning grip . . . without cutting into your hand.
5. New "perfection fitting" of handle to blade.
6. Integrally forged bolster to support handle.
7. Blades have precision ground tips.
8. Tips 100% tested with normal strain for twisting.
9. Finely polished blades protected by lacquer coating against rust.

Stock No.	Blade Length	Blade Edge	Price
1-PO	1½"	¼"	
2-PO	2½"	¼"	
4-PO	4"	5/16"	
6-PO	6"	3/8"	
8-PO	8"	7/16"	
12-PO	12"	5/8"	

Heavy Duty Octo-Grip Screw Driver

NO. 18-PO—Plastic handle (same as 12-PO and not as illustrated) blade 18" long, ⅝" edge, ½" square stock blade. Made for the toughest screw driving job. Each .....

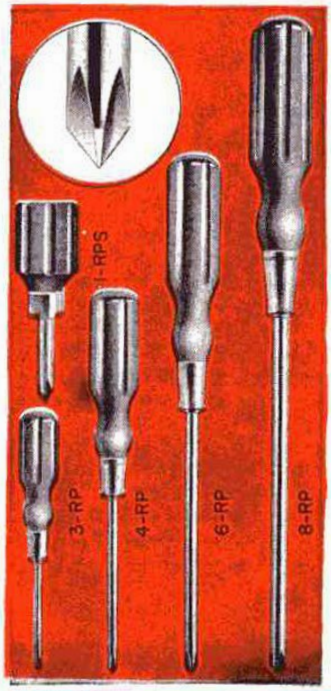
Extra Long Screw Driver

★PO-2385—An extremely long, slender bladed screw driver, ideal for working on lower radiator hose clamps on late Ford V-8's, and very useful for many other out-of-the-way jobs. Plastic "Octo-Grip" handle, finely tempered blade with cross-ground tip. Each .....

Cabinet Screw Drivers

Long, thin drivers, especially good for electrical and body work —get into close corners, Plastic handles, 3/16" hexagon alloy steel blade—carefully heat-treated to give sturdy strength. Well balanced and giving a firm grip.

NO. 143—3" Blade. Each.....
NO. 146—6" Blade. Each.....
NO. 1410—10" Blade. Each.....



Short Screw Drivers

★NO. 1011—2" blade ⅛" stock, plastic handle fitted with pocket clip. Tip magnetized . . . for very tiny screws. Each.....

ST-234—3" blade 9/64" stock. New Octo-Grip plastic handle adapts it to small electrical jobs. Ideal for all small work. Each .....

NO. 154—1 17/32" blade, 9/32" tip width. This plastic handle screw driver is particularly adaptable for use on overhead valve jobs. The handle is not quite the same as shown in the illustration but is fluted to afford a firmer hand grip. Time and again you'll find it just right for jobs where long drivers cannot be used. Each.....(S)

Reed and Prince Screw Driver Set

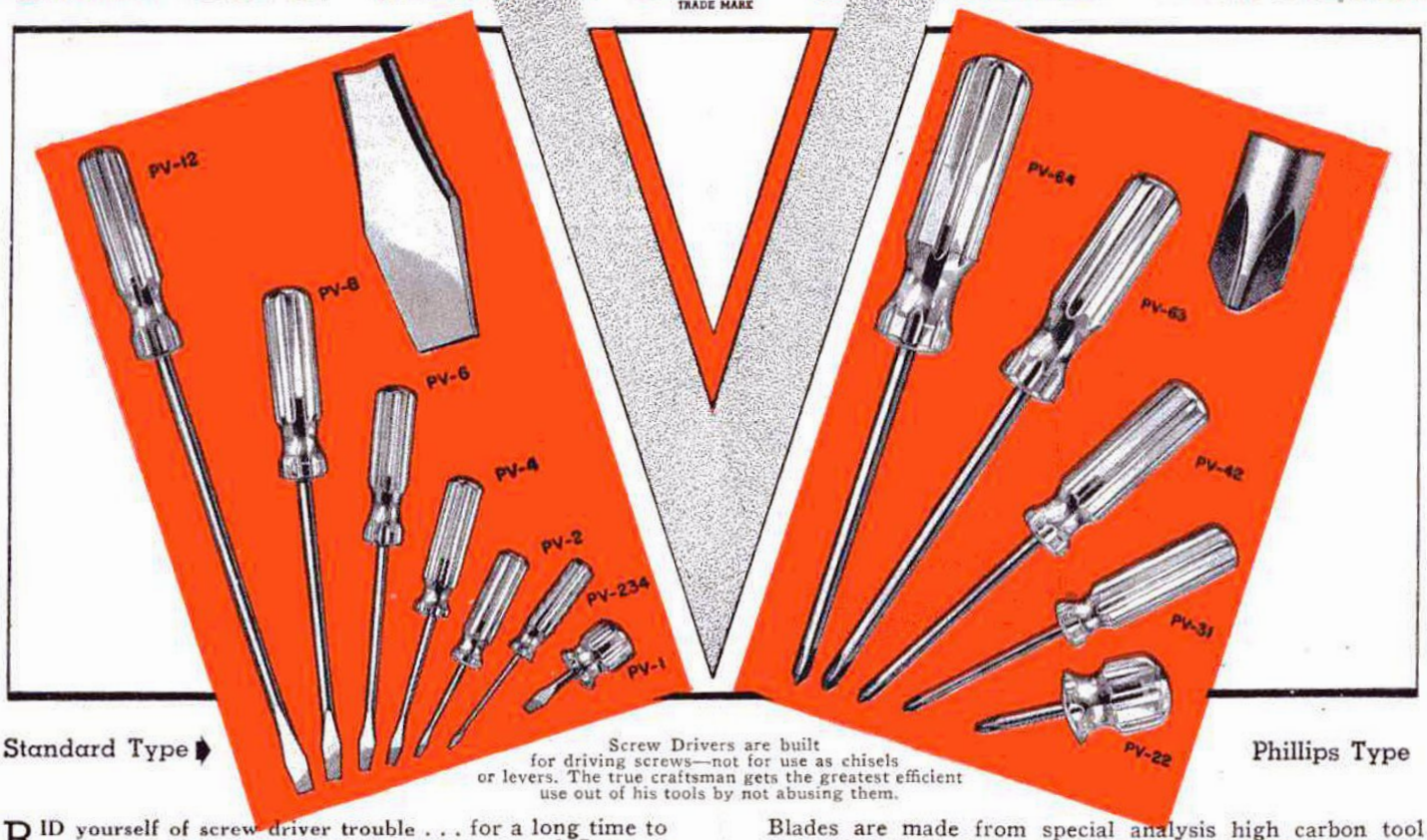
★RP-5—REED AND PRINCE SCREW DRIVER SET.....

Stock No.	Blade Length	Blade Tip	Price
★1-RPS	1½"	¼"	
★3-RP	2½"	5/16"	
★4-RP	4"	¼"	
★6-RP	6"	5/16"	
★8-RP	8"	⅜"	

Among the various types of recessed head screws on the market is the Reed and Prince cross slot screw which is becoming increasingly popular. This screw is not to be confused with the Phillips screw, for the differences in the slots are such that each requires a special screw driver. Phillips screw drivers cannot be used successfully on Reed and Prince, or vice versa. Note the close-up of the tip and compare it with the Phillips screw driver shown on page 36. Don't take chances on ruining your present set of Phillips drivers—get this set and be prepared to handle those jobs using the Reed and Prince screw. You'll save time and money!

SNAP-ON'S NEW PAR-V SCREW DRIVERS

TRADE MARK



Standard Type ➧ ➧ Phillips Type

Screw Drivers are built for driving screws—not for use as chisels or levers. The true craftsman gets the greatest efficient use out of his tools by not abusing them.

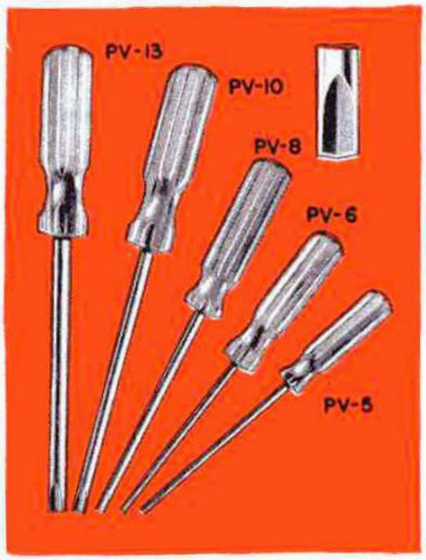
RID yourself of screw driver trouble . . . for a long time to come . . . at reasonable cost—with a set of Snap-on PAR-V's, built to deliver plenty of rugged service.

Huge quantity production and the use of standard fluted golden plastic handles has enabled us to place extremely attractive prices on this line, and at the same time give you very high grade tools. The handles are the same quality as those on our more expensive screw drivers, but are manufacturer's standard design . . . they are correctly sized to and balanced perfectly with the blade and afford an excellent hand grip.

Blades are made from special analysis high carbon tool steel, electrically heat treated and oil tempered to give the best combination of tip hardness and blade strength—to give long trouble-free use. Tips are correctly tapered, cross ground and machined to fit the screw head and give the greatest possible turning strength. Always use the proper size driver for easy work and to protect both driver and screw head.

Double wing crimping on the blade shank anchors it securely and prevents the blade from loosening or turning in the handle.

Clutch Type ➧



Specifications—Standard Type PAR-V Screw Driver

Stock No.	Overall Length	Blade Diameter	Blade Length	Tip Width	Tip Thickness	Price
★PV-234	6″	9/64″	3″	9/64″	.020″	
★PV-1	3 1/4″	1/4″	1 1/2″	1/4″	.039″	
★PV-2	5 3/4″	7/32″	2 1/2″	7/32″	.032″	
★PV-4	7 3/4″	1/4″	4″	1/4″	.039″	
★PV-6	10 1/4″	5/16″	6″	5/16″	.048″	
★PV-8	13″	3/8″	8″	3/8″	.050″	
★PV-12	17 1/2″	3/8″	12″	7/16″	.060″	
★PV-25	4 1/4″	1/8″	2″	1/8″	.025″	

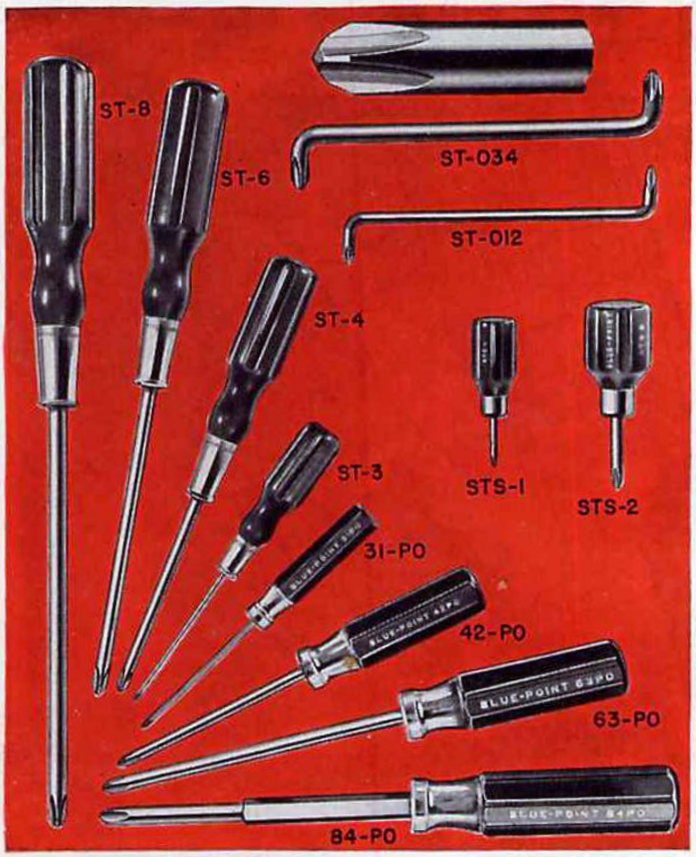
Specifications—Phillips Type PAR-V Screw Driver

Stock No.	Overall Length	Blade Diameter	Blade Length	Phillips Bits	Price
★PV-22	3 1/4″	1/4″	1 1/2″	#2	
★PV-31	6″	3/16″	3″	#1	
★PV-42	7 3/4″	1/4″	4″	#2	
★PV-63	10 1/4″	5/16″	6″	#3	
★PV-64	13″	3/8″	6″	#4	

Specifications—Clutch Type PAR-V Screw Driver

Stock No.	Overall Length	Blade Diameter	Blade Length	Blade Tip	Price
★PVC-5	7 1/4″	5/32″	4″	5/32″	
★PVC-6	7 1/4″	11/64″	4″	3/16″	
★PVC-8	8 3/4″	15/64″	5″	1/4″	
★PVC-10	9 1/4″	19/64″	5″	5/16″	
★PVC-13	10 1/4″	13/32″	6″	13/32″	

For Twenty-five Years the Standard of Highest Quality



PHILLIPS SCREW DRIVERS

for Phillips Recessed Head Self-Centering Screws and Bolts

PHILLIPS head recessed screws are now being used in so many new applications that we offer a choice of four different types of screw drivers to handle these special screws. The Plastic handle series are excellent tools for electrical and general work—the wood handle series are good if cost must be considered—the stub series are useful in very close quarters and the offset series take awkward jobs where other drivers will not reach. Blades are all made from best quality steel tempered to give the utmost service. Four sizes of Phillips drivers are necessary to drive the entire range of screw and bolt sizes, and it is poor economy to try to use one or two drivers to cover the full range . . . when the wrong size driver is used, it does not fit the screw recess properly and is subject to extreme wear or unnecessary breakage. So for your information we list the various types and sizes of Phillips screws and the correct bit size for each.

Use the Proper Size Driver for Phillips Screws

Phillips Bit No.	Machine Screw Diameters	Wood Screw Diameters	Stove Bolt Diameters	Case Hardened Sheet Metal Screw Diameters
	Flat, Oval, and Fillister Heads			Flat and Oval Heads
1	#4 and Smaller	#4 and Smaller	.....	#4
2	#5 to #10 Inc.	#5 to #9 Inc.	1/8" to 3/16"	#5 to #10 Inc.
3	#12 to 5/16"	#10 to #16 Inc.	1/4" to 5/16"	#12 to #14 Inc.
4	3/8" and Larger	#18 and Larger	3/8" to 1/2"	.....
	Round Heads			
1	#5	#4 and Smaller	1/8"	#4 and #5
2	#6 to #10 Inc.	#5 to #10 Inc.	5/32" to 3/16"	#6 to #12 Inc.
3	#12 to 5/16"	#11 to #16 Inc.	1/4" to 5/16"	#14
4	3/8" and Larger	#18 and Larger	3/8" to 1/2"	.....

Types of Phillips Head Screw Drivers

Plastic OCTO-GRIP Handle				Wood Handle				Stub Handle				Offset Handle			
Stock No.	Lgth. of Shank	Phillips Bit Size	Price	Stock No.	Lgth. of Shank	Phillips Bit Size	Price	Stock No.	Lgth. of Shank	Phillips Bit Size	Price	Stock No.	Lgth. of Shank	Phillips Bit Size	Price
★22-PO	1½"	2													
★31-PO	3"	1		★ST-3	3"	1		★STS-1	1"	1				1	
												★ST-012	6"		
★42-PO	4"	2		★ST-4	4"	2		★STS-2	1⅜"	2				2	
★63-PO	6"	3		★ST-6	6"	3									
★84-PO	6"	4		★ST-8	8"	4									

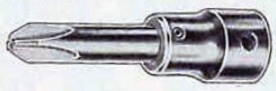


Detachable Head Screw Driver Set for Phillips and Slotted Screws

Stop replacing complete screw drivers every time you break a bit—here's a set of 5 detachable heads designed to fit on one handle that will service almost all screw driving jobs and allow you to replace broken bits at extremely low cost. The bits include the No. 2 and No. 3 Phillips bits and three standard bits to fit slotted screws No. 5 and larger. This tool is especially useful for production work with case hardened screws —where wear on tips of screw drivers means scrapping the complete driver.

GA-80—INTERCHANGEABLE SCREW DRIVER SET .....
GA-80-1—Octo-Grip handle only.....
★GA-80-2—No. 2 Phillips Bit.....
★GA-80-3—No. 3 Phillips Bit.....
★GA-80-30—.030" Standard Bit.....
★GA-80-35—.035" Standard Bit.....
★GA-80-40—.040" Standard Bit.....

Socket Type Phillips Screw Drivers



Many mechanics prefer the use of Phillips Screw Driver Bits designed to fit standard socket wrench handles, and we list special bits to fit. Ferret (⅜" square drive) Handles, see page 11.
We also call your attention to our line of PAR-V Phillips type drivers shown and described on page 35. We strongly recommend both the OCTO-GRIP and PAR-V drivers.

Standard Screw Drivers

Drivers of exceptional strength and utility. The blade extends clear through the wood handle and a plastic cap is fitted onto the end of the shaft. Blade made of octagon stock, special alloy steel, heat treated for general purpose use.

TX-4—4" blade length, ¼" tip. Each.....
TX-6—6" blade length, 5/16" tip. Each.....
TX-8—8" blade length, ⅜" tip. Each.....

Short Screw Drivers

NO. 153—A sturdy tool for tight screws in close places, especially useful for overhead valve adjusting screws, drag links, etc. Wood handle, 2⅛" blade length, tip ⅜" x 1/16". Each.....

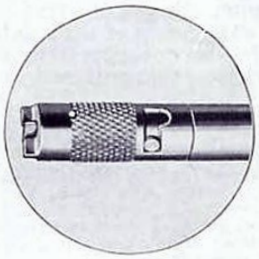
NO. 142—Round wood ball handle gives a good hand grip. Useful for many small jobs. 2" blade, ¼" tip. Each.....

★NO. 181½—A handy tool for small jobs . . . 1½" blade, ⅛" tip. Wood handle. Each.....

Screw Starters

Patents Applied for

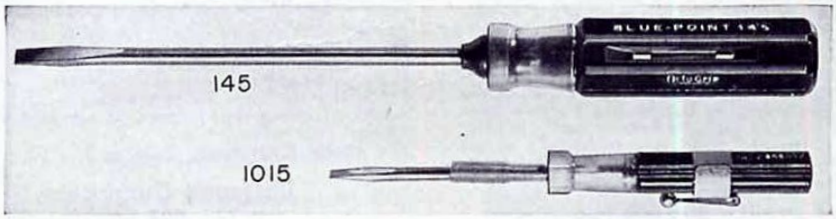




The end of this tool chucks tightly into the screw slot with no outside claws to interfere . . . they provide a grip that will withstand an eight pound pull and automatically release when pressure becomes too great. Light weight Duralumin Handles . . . high carbon steel gripping bits. Note: These are for starting screws only—use standard driver to tighten.

★GA-11—SCREW STARTER. 2½" long. Each.....
★GA-12—SCREW STARTER. 5¼" long. Each.....
★GA-13—SCREW STARTER. 9¼" long. Each.....

Spark Testing Screw Drivers



Put an end to guess work with these spark plug testing Screw Drivers . . . the neon tube fitted into the handle tells you the condition of the plug by the type of flash it gives when you place the blade tip to the spark plug. If the flash is brilliant, the plug is in good condition—a thin flash indicates too narrow a gap—no flash indicates that the plug is shorted. The slender blades and shock-proof plastic handles make these tools excellent for all types of electrical work where smaller sizes of screws are used.

★NO. 145 SCREW DRIVER—6" blade. Each.....

★NO. 1015 SCREW DRIVER—3" blade. This tool is fitted with a pocket clip and also has a spring sleeve which slips over the blade tip and protects your pocket. Each.....

Neon Tubes for Spark Testing Screw Drivers

★NT-2—Replacement Neon Tubes for No. 145 Screw Driver are available. When replacing tubes, be sure to save the original springs in screw driver handle, as none are included with the tubes. Each.....

Offset Screw Drivers

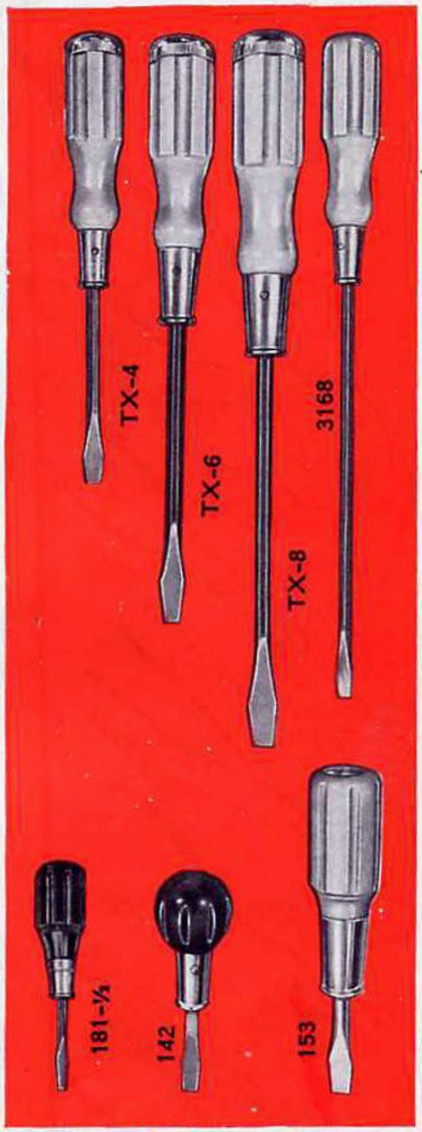
★NO. 060—A heavy duty offset type screw driver intended for general drag link and shock absorber adjusting work. 7½" long, ½" octagon stock, blades 25/32" thick. Each.....

★H-50B—An improved type of hammer head Screw Driver . . . one blade is parallel with the handle, the other blade at right angles to it. It is an excellent tool for many jobs which do not allow sufficient room for the use of a standard type Screw Driver. 7" long, blade ½" wide, 1/16" thick. Each.....

★NO. 050—A heavy duty offset type Screw Driver intended for drag link and shock absorber adjusting work. 7" long ½" octagon stock, blades 25/32" thick. Especially useful for Ford work. Each.....

The following numbers are all the same design as the No. 020 illustrated.

★NO. 020—¼" stock, 4" length. Blades ¼" wide, 1/32" thick. Each.....
★NO. 030—5/16" stock, 5" length. Blades 5/16" wide, 1/32" thick. Each.....
★NO. 040—⅜" stock, 5½" length. Blades ⅜" wide, 3/64" thick. Each.....





For Twenty-five Years the Standard of Highest Quality



VACUUM GRIP PLIERS

BUILT to the Highest Attainable Quality Standards. Recognized by particular mechanics the world over as a true quality line and known everywhere for their remarkable strength and durability.

Hammer forged from special high carbon Silico-Molybdenum alloy tool steel—NOT CASE HARDENED on surface only—but hardened and tempered thru and thru. These tools are masterpieces of the tool maker's craft—for mechanics who know and appreciate quality . . . precision tools of the highest type that will outlast several pairs of ordinary pliers.

Water Pump Pliers

A gripping pliers especially suitable for tightening water pump packing nuts or for jobs such as turning any shaped nut, bolt, rod, etc. The slip-joint design permits four jaw adjustments to give an approximately parallel working position to the jaws up to 1½" opening. Teeth are set at a backward angle to grip rods, etc., lets you work in cramped places with short strokes. The head is set at a 45° angle for easy action in otherwise inaccessible places. Full nickel finish.

NO. 9-A—9" WATER PUMP PLIERS. Each

Heavy Duty Gripping Pliers

For general purpose work where plenty of gripping power is required these pliers just fit the bill. The sturdy jaws grip on like a pipe wrench and are set at an angle for easy operation in close places. 3-position adjustable slide joint adapts them to different sizes of work. Full nickel finish.

NO. 61—6" H.D. GRIPPING PLIERS. Each .....
NO. 62—8" H.D. GRIPPING PLIERS. Each .....

Ignition Pliers

Midget Pliers built on the same gripping principle as the No. 9 described above, but featuring the standard three point adjustable slide joint. It is a dandy tool for servicing those small carburetor, ignition, and electrical jobs. Full nickel finish.

NO. 105—5" IGNITION PLIERS. Each...

Midget Handy Gripping Pliers

A useful little pair of pliers that can be used to excellent advantage on all extremely small work, radio, electrical, small bench jobs, etc. Has full fashioned handles. Full nickel finish.

NO. 5—4½" MIDGET PLIERS. Each.....

Heavy Duty Pliers

Giants for gripping—general use pliers with adjustable joint . . . notched type of wire cutters . . . bow handles. Every mechanic needs to have these sturdy Pliers in his kit. Full nickel finish.

NO. 45—5" H. D. PLIERS. Each.....
NO. 46—6" H. D. PLIERS. Each.....
NO. 47—7" H. D. PLIERS. Each.....
NO. 49—9" H. D. PLIERS. Each.....

Heavy Duty General Purpose Pliers

A popular favorite with automotive mechanics, combining powerful cutters with tremendous gripping strength . . . has a cutting capacity equal to lineman pliers. Non-slip, full fashioned handles. Full nickel finish.

NO. 137—7" PLIERS. Each.....

General Use Pliers

An all round general use cutting and gripping pliers. This pattern is indeed a two-in-one tool . . . combines the features of a lineman's cutting and a general gripping pliers. They're just right for anyone who wants an adjustable joint pliers that will *CUT*. Full nickel finish.

NO. 34—4½" PLIERS. Each.....
NO. 35—5" PLIERS. Each.....
NO. 36—6" PLIERS. Each.....

Light Weight Grippers

An exclusive Vacuum Grip design for general use . . . particularly popular with flyers and airplane mechanics because of its slender design. Light in weight but built for Heavy Duty work . . . capacity far exceeds its size . . . Long reach . . . thin pointed nose . . . powerful wire cutters. Full nickel finish.

NO. 65—5" GRIPPERS. Each.....

Diagonal Cutters No. 386

Handles your tough cutting jobs with ease . . . the sturdy over-capacity cutter jaws on this pliers make short shift of all jobs. A favorite with garage mechanics, industrial plants, wire box makers, etc. Cutter jaws are hand edged after the tool is assembled to insure absolute accuracy in alignment and maximum efficiency.

NO. 386—6" DIAGONAL CUTTERS. High steel buffed finish. Each.....

Nos. 85, 86, 87, 184

Recognized as the highest quality diagonal cutters made . . . hammer forged from finest alloy tool steel . . . individually hardened . . . electrically and oil tempered through and through. Hand filed, perfectly matched cutter jaws . . . spring tempered handles. Number 87 is recommended for cotter pin work and tough cutting jobs. Full steel buffed finish.

NO. 184—4" MIDGET CUTTERS. Ea.....
NO. 85—4½" DIAGONAL CUTTERS. Ea..
NO. 86—6" DIAGONAL CUTTERS. Ea...
NO. 87—7" DIAGONAL CUTTERS. Ea...

End Cutters

This improved type of end cutter has become the recognized standard of design and quality . . . hand filed cutting edges for easy and close cutting. Hammer forged from finest steels . . . hardened and tempered to provide the maximum strength and durability. Long spring tempered bow handles give powerful leverage for easy cutting. Vacuum Grip, non-slip handle treatment. High steel buffed finish.

NO. 17—7" END CUTTERS. Each.....



VACUUM GRIP PLIERS

THE scientific design of Vacuum Grip Pliers distributes the strain over the entire tool, insuring maximum strength. *Light in weight . . . perfectly balanced . . .* not "head heavy." Smooth, easy riding joints. Sharp, deeply milled teeth give utmost gripping power with minimum handle pressure. Hand filed, perfectly aligned, sharp, true cutters on the cutting patterns. Spring tempered, "Vacuum Grip," non-slip handles.

Needle Nose Pliers

Excellent tools for all work calling for needle nose patterns . . . despite the structural slenderness of the nose they are extremely rugged. The easy-riding joints are specially machined for wabble-free action and tempered for extreme strength, while the nose is heat treated to give spring strength and hardness—vital features in pliers of this type which must retain their jaw alignment in order to assure perfect cutting and gripping power through years of hard usage. Here's husky tools that don't have to be babied, yet so skillfully designed that they are adaptable to fine, delicate work. High steel buffed finish.

★NO. 94—4½" MIDGET NEEDLE NOSE PLIERS. Without wire cutter. Bow handles. Each

★NO. 96—6" NEEDLE NOSE PLIERS. Without wire cutter. Bow handles. Each.....

★NO. 196—6" NEEDLE NOSE PLIERS. With wire cutter. Bow handles. Each.....

★NO. 197—7" NEEDLE NOSE PLIERS. With wire cutter. Full fashioned handles. Each.....

Long Nose Pin Pliers

A powerful pair of pliers of heavy construction . . . can be used on any number of jobs that require needle nose pliers of extra long reach. Furnished with deeply recessed "V" shaped notched grooves at the ends of the jaws, providing a sure grip to pull the most stubborn pin . . . handles any size pin. Specially heat treated throughout for hardness and toughness—jaws and handles spring tempered. High steel buffed finish.

★NO. 597—7$\frac{3}{4}$" PIN PLIERS. Each.....

Battery Pliers

Built expressly for battery installation work . . . handles all types of terminals . . . will not injure tops of jars. Parallel grip with specially milled teeth. Can also be used for nut turning, adjusting brakes, etc. Nose is tapered for working in confined places . . . jaws offset to provide knuckle clearance. High steel buffed finish.

NO. 7-A—7" BATTERY PLIERS. Each.....

Angle Nose Battery Pliers

This skillfully designed tool handles all battery terminals without injury to the top of the jar. While made primarily for battery service, it is valuable for all general purposes. Slide joint gives maximum jaw opening of 1¼", parallel at all openings. The thin tapered nose is offset at 30° angle for "getting around the corners" and working in confined spaces. The full-fashioned, long handles give extra reach and greater leverage with comfortable hand grip. Full nickel finish.

NO. 308—7" BATTERY PLIERS. Each...

Lineman Pliers

A powerfully built tool for gripping, twisting, hammering, and cutting . . . hammer forged from finest high carbon alloy tool steel . . . individually hardened in liquid heat process . . . tempered in oil and subjected to four separate and distinct local electric tempering operations applied to the joints, cutting blades, gripping jaws and handles. Constructed to meet the most exacting requirements. High steel buffed finish.

NO. 57-R—7" LINEMAN PLIERS. Each..

NO. 58-R—8" LINEMAN PLIERS. Each..

Brake Key Pliers

For use on all cars equipped with hydraulic and mechanical brakes . . . saves time and trouble in the tricky operation of removing the horse shoe lock washer that fits over the anchor pin to hold the brake shoe in place. Made with jaw tips bent at a right angle and with tips of jaws serrated on the outside to prevent slipping. Spring keeps the jaws in closed position to facilitate handling. Full polished finish.

★NO. 70-A—7" BRAKE KEY PLIERS. Each .....

Brake and Cotter Pin Pliers

Mechanics who overhaul brakes will appreciate the labor-saving feature of this special purpose pliers which simplifies the operation of removing and replacing brake springs . . . handles all cars. The hook jaw is designed with an inserted steel hook which can be easily and cheaply replaced. Satin finish.

NO. 31—BRAKE SPRING PLIERS. Each....

★NO. 31-A—Replaceable Hook. Each.....

Aviation Duck Bill Pliers

Aviation mechanics will find these duck bill pliers just the ticket for pulling the safety wires used to lock nuts on airplanes. The long, flat jaws have a fine serrating on the inside of the tips which will grip without chewing up the wire ends. These pliers are also extremely useful for many small repair jobs on radio, adding machines, typewriters, etc.

NO. 60-R—7½" Duck Bill Pliers. Each.....

Upholstery Pliers

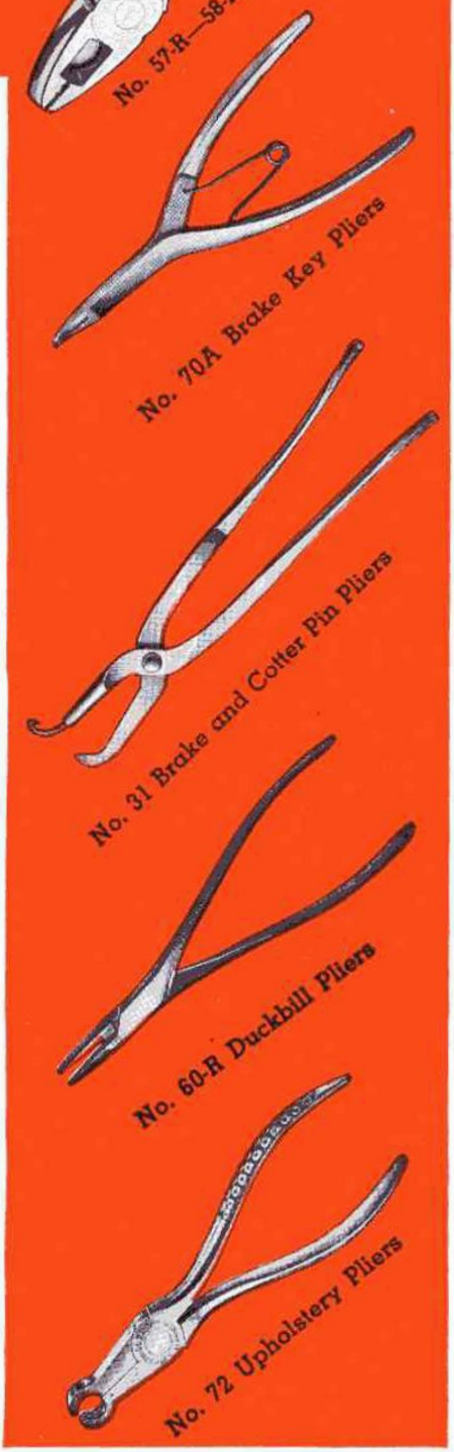
NO. 72—DISCONTINUED.

Insulating Handle Grips

Any 7" or 8" plier can be safely used to service electrically operated equipment when fitted with these plastic insulating grips. Easily attached without heat, they conform to any shape handle. Non-burning and non-explosive, these grips have high di-electric strength and are shockproof to the average voltage encountered by linemen. Bright red, they are easily seen if the plier is dropped in snow, grass, etc.

PG-7A—7" PLASTIC GRIPS, per pair.....

PG-8A—8" PLASTIC GRIPS, per pair.....



For Twenty-five Years the Standard of Highest Quality



BLUE-POINT "*Supreme*" CHISELS AND PUNCHES

Trade name "Supreme" Reg. U. S. Patent Office

THE important thing about these chisels and punches, as far as you're concerned, is the fact that they will *out-cut* and *out-punch* similar tools made from ordinary steels. The steel used in "Supreme" Chisels and Punches is the result of years of experiment . . . a combination of metallic alloys which, when used with a high per cent of carbon produces a steel possessing physical qualities of *amazing strength and toughness.* Note the design of these tools . . . sanded finish square handles with full rounded corners give a firm grip and solid drive. Polished steel finish on blades. *You can't buy a better tool.*

Note: Chisels and punches, if made too hard, will break . . . if made too soft, they will flatten over. The tempering of Blue-Point "Supreme" Chisels and Punches is scientifically controlled to give the best hardness and toughness for long service and all round work. No *good* mechanic will abuse tools of this kind and expect them to stand up.

Supreme Flat Chisels



No.	Square Stock	Edge	L'gth	Each
S-812	3/8"	7/16"	5 1/2"	
S-816	7/16"	1/2"	6"	
S-820	1/2"	9/16"	6 1/2"	
S-824	11/16", 9/16", 5/8", 3/4"	3/4"	7"	
S-828	5/8", 3/4"	7/8"	8"	

Flat Chisel Set

Consisting of one each of the above sizes and giving you the proper tool for practically every chisel job.

SC-5—SET—Tools only .....
SC-5K—SET—Above set in C-50 Kit Bag .....

Supreme Cape Chisels

Number	Square Stock	Edge	Length	Each
★S-13	5/16"	3/4"	6"	
★S-14	3/8"	5/16"	5 3/4"	

Supreme Round Nose Cape Chisel

Number	Square Stock	Width of Edge	Length	Price
★S-12	3/8"	5/16"	6"	

Supreme Diamond Point Chisels

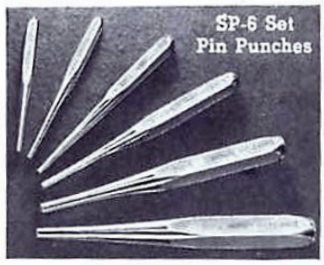
Number	Square Stock	Edge	Length	Each
S-15	7/16"	3/4"	5 3/4"	
S-19	3/8"	3/8"	6"	

Supreme Center Punches

S-3-C—5/16" Square Stock, 5" Length. Each.....
S-4-C—7/16" Square Stock. 6" Length. Each.....

Supreme Pin Punches

No.	Square Stock	Point	L'gth	Each
★S-603	3/32"	3/32"	5"	
★S-604	5/16"	1/8"	5 1/2"	
S-605	3/8"	5/32"	6"	
S-606	7/16"	3/16"	6 1/2"	
S-608	1/2"	1/4"	6 3/4"	
S-610	9/16"	5/16"	7"	



Pin Punch Set

Contains one each of the above six sizes of "Supreme" Pin Punches . . . buy the full set and have the proper size tool for every job.

SP-6—SET—Tools only.....
SP-6K—SET—The above set in C-60 Kit Bag.....

Supreme Long Tapered Punches

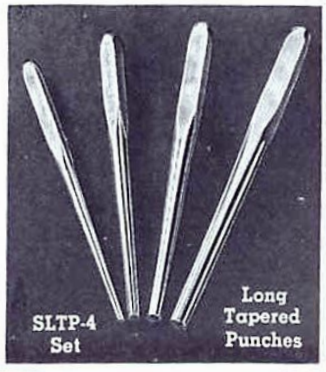
These punches are invaluable for all kinds of lining up work . . . carefully drop forged and finished to give long, lasting service. It will pay you to get the entire set.

No.	Square Stock	Point	L'gth	Each
S-905	3/8"	5/32"	8"	
S-908	5/16"	3/4"	8 1/2"	
S-910	1/2"	5/16"	9"	
S-912	9/16"	3/8"	9 1/2"	

L. T. Punch Set

SLTP-4—SET—Consisting of one each of the above four sizes of Supreme Long Tapered Punches. Tools only .....

SLTP-4K—SET—The above set in C-42 Kit Bag.....



CP-16 "Supreme" CHISEL AND PUNCH SET

THERE are many advantages in owning a Blue-Point "Supreme" Punch and Chisel Set . . . you have a uniform outfit of dependable high quality tools of *matched design* . . . made by one factory of national reputation instead of a haphazard collection of odds and ends.

You can't turn all nuts with one wrench . . . you can't handle all jobs with one size chisel or punch—and do good work.

This set gives you the correct tool for practically all chisel and punch jobs and represents a most useful selection of tools for all round work.

Blue-Point Chisels and Punches are hammer formed the same way the blacksmith used to make them by hand, only we use power hammers. The hammering refines the grain, and the low temperature at which they are formed preserves the carbon which gives strength and lasting qualities to the steel. Set contains the following units:

5—"Supreme" Flat Chisels, Nos. S-812 to S-828 (See page 40).
6—"Supreme" Pin Punches, Nos. S-603 to S-610 (See page 40).
2—"Supreme" Diamond Point Chisels, S-15 and S-19 (See page 40).
1—"Supreme" Cape Chisel, S-13 (See page 40).
1—"Supreme" Round Nose Cape Chisel, S-12 (See page 40).
1—"Supreme" Center Punch, S-4-C (See page 40).

CP-16—CHISEL AND PUNCH SET. Tools only..
CP-16K—Above set in C-160 Kit Bag.....

Midget "Supreme" Punch and Chisel Set



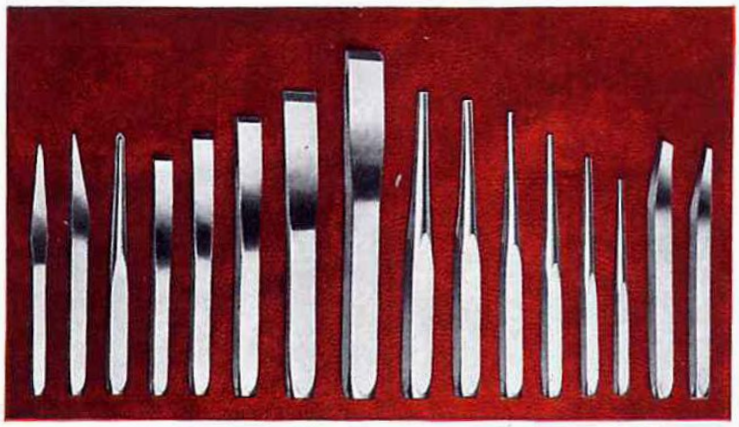
Until you see this new set you have no idea what a really good Midget Set of Punches and Chisels looks like. Seven different units comprise the set and offer you the handiest little outfit you ever saw for those radio, electrical, and other small jobs. The set consists of the following tools which are built of the same Semi-High Speed Steel as the large "Supreme" Punches and Chisels. All are made from 9/32" square stock.

★SVP-402—Drift Pin Punch, 3" long, 3/32" point.....
★SVP-403—Drift Pin Punch, 3¼" long, ⅛" point.....
★SVP-404—Center Punch, 3⅝" long.....
★SVP-405—Starter Pin Punch, 3¾" long, 1/16" point.....
★SVP-406—Cape Chisel, 3⅞" long, 3/16" edge.....
★SVP-407—Round Nose Cape Chisel, 4" long, 5/32" wide.....
★SVP-408—Flat Cold Chisel, 4⅛" long, 5/16" edge.....

★SVP-7—MIDGET "SUPREME" PUNCH AND CHISEL SET. Complete in kit bag.....

Guarantee—Chisels and Punches

Every Blue-Point Chisel and Punch is tested under rigid instructions to reject for the slightest visible defect of material or workmanship. We will replace any tool that, in the reasonable usage for which it was designed, proves defective in workmanship or material, provided that claim for replacement be made within thirty days from date of purchase. No replacement will be made of tools which have been ground or abused.



CP-16—Blue-Point "Supreme" Chisel and Punch Set

"Supreme" Starter Punches

When driving out pins, bolts, etc., it is always advisable to begin the job with a "starter" punch. These punches are tapered to give a strong shaft capable of withstanding the first heavy shock blows without breaking. The tip is tapered in a straight line from the shaft and the tool is tempered to exacting requirements to insure its being extremely hard and strong and yet not brittle. Use a Drift Punch (listed below) to finish the job through.

Stock No.	Square Stock	Length	Each
★S-203	9/32"	5¼"	
S-204	3/8"	6⅛"	
S-206	7/16"	6⅜"	
S-208	½"	6½"	
S-210	9/16"	6¾"	



Starter Punch Set

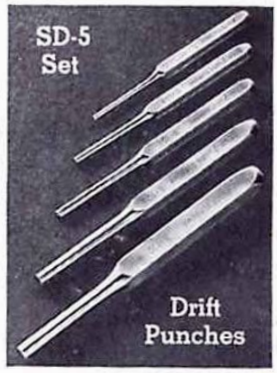
Contains one each of the above five sizes of "Supreme" Starter Punches . . . tools you will appreciate for their efficiency and long, dependable service.

SS-5—SET. Tools only.....
SS-5K—SET—Above set in C-50 Kit Bag .....

"Supreme" Drift Punches

For finishing the job of removing the pins or bolts already started with the Starter Punches listed above. *Never start a pin with a drift punch.* It is not designed for such work. Use a Starter Punch to loosen the pin and finish pushing it through with a Drift Punch. These tools are especially heat treated to withstand extreme strain and are tough and stiff without being brittle. The full length of the driving point is the same diameter.

Stock No.	Square Stock	Point	Length	Each
★S-103	¼"	3/32"	4¼"	
★S-104	9/32"	5/32"	4⅝"	
S-106	5/16"	7/32"	5"	
S-108	3/8"	¼"	5⅜"	
S-110	7/16"	5/16"	5¾"	



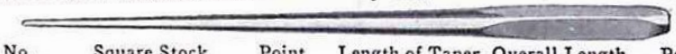
Drift Punch Set

Contains one each of the above five sizes of "Supreme" Drift Punches . . . use with the Starter Punches shown at top of page.

SD-5—SET. Tools only.....
SD-5K—SET. Above set in C-50 Kit Bag

Long Lining-up Punch

Here is a long lining-up punch designed for assembly work. Mechanics doing body and fender work will find it very useful for lining holes in fenders, frames, etc. It has a center point that can be used for punching holes in metal. For general purpose work it will be a valuable addition to any kit.



No.	Square Stock	Point	Length of Taper	Overall Length	Price
★S-714	9/16"	5/32"	9 13/16"	14"	

For Twenty-five Years the Standard of Highest Quality

BLUE-POINT FLAT CHISELS

HAND-FORGED from finest high carbon special alloy chisel steel, individually heat-treated and tested to the standard best adapted to the use for which each tool is designed. Perfectly balanced, hand-ground cutting edges. The blades are long and thin and can be re-edged with a file when necessary.

Note: Never re-edge a chisel on a grinding wheel, as the temper will invariably be changed to a less satisfactory degree of hardness.



No.	Stock	Edge	Length	Each
812	3/8"	3/8"	5½"	
816	7/16"	1/2"	6"	
820	1/2"	5/8"	6½"	
824	5/8"	3/4"	7"	
828	3/4"	7/8"	8"	

Flat Chisel Set

Consisting of the five sizes of Flat Chisels shown above, giving you the correct tools for practically every chisel job.

No. C-5 SET—Tools only .....
No. C-5K SET—Above tools in C-50 kit bag.

Long Flat Chisels

Four tools that will prove exceptionally valuable wherever long reach is necessary, such as shearing off frame rivets, etc. Hammer forged at low heat, carefully formed, heat treated, tempered, and ground to give outstanding performance and durability.

No. 1020—5/8" stock, 3/4" edge, 11" length. Each.....
No. 1024—3/4" stock, 7/8" edge, 12" length. Each.....
No. 1628—3/4" stock, 7/8" edge, 16" length. Each.....
No. 1832—7/8" stock, 1" edge, 18" length. Each.....

Blue-Point Pinch Bars

If ever a tool needed to be tough, it's a Pinch Bar . . . used for most anything under the sun, this tool meets a maximum amount of abuse . . . Blue-Point Pinch Bars are *built to "take it"* . . . they are hammer forged from the highest grade alloy steel and tempered with utmost care to provide great strength.

No. 1112—7/16" octagon stock, 1/2" edge, 11" length. Each.....
No. 1658—1/2" octagon stock, 5/8" edge, 16" length. Each.....
No. 2434—3/4" octagon stock, 3/4" edge, 24" length. Each.....

Blue-Point Pry Bar

Does everything a standard design pinch bar will do . . . *and a great deal more.* The point is useful for lining up work, and the rolling head exerts a tremendous amount of leverage for prying with . . . it can often be used for prying out gears, bushings, etc. Hammer forged from finest alloy steel . . . octagon shaped bar . . . 16" long.

No. 1650—BLUE-POINT PRY BAR. Each.....

Cotter Pin Puller



S-9094-A2X
Showing Inserted Hook

The hook end is inserted into the eye of the cotter pin and a few sharp blows struck on the inside of the anvil end . . . pulls the most stubborn pin easily. The body of the tool is slotted, and a hook fashioned from an exceptionally tough special analysis steel is pinned in place. This construction adds greatly to the strength of the tool and assures the ability to pull every pin, however tight it might be. Overall length is 10 inches.

★S-9094-A—COTTER PIN PULLER. Each.....
★S-9094-A2X—Hook and rivets only. Per Set.....

Cotter Pin Tool

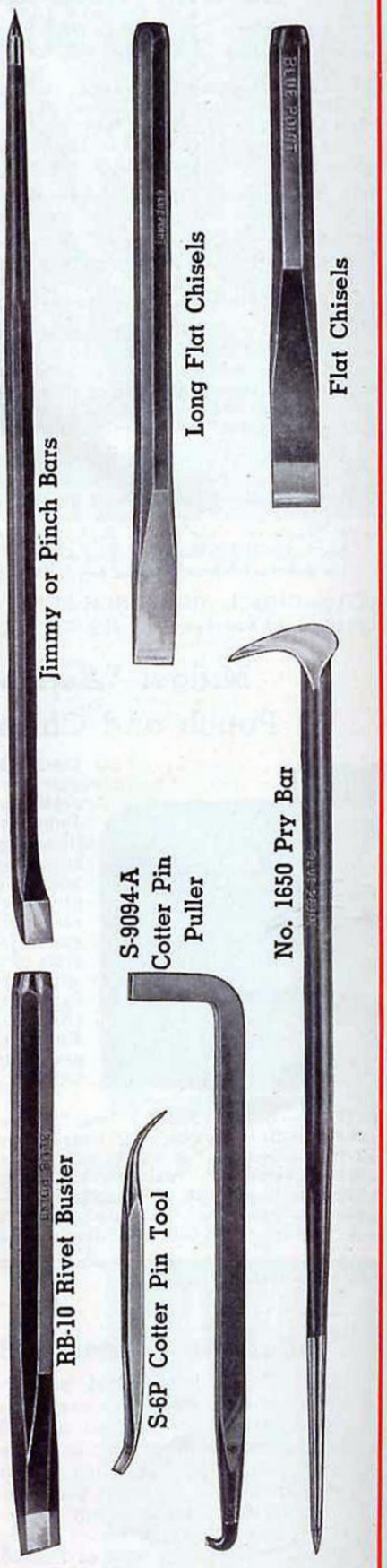
An excellent tool for spreading and removing cotter pins . . . can also be used to great advantage for inserting water pump packings, etc. Hammer forged from "Supreme" chisel steel with square bevel shank for easy handling and firm grip. Overall length 6", 5/16" stock.

★S-6P—COTTER PIN TOOL. Each.....

Rivet Busters

Use a rivet buster on rivet heads and save your chisels. A chisel cannot catch the rivet head at the best point for easy removal . . . these tools are made especially to contact at the right point, and a few hammer blows will shear the head clean off.

RB-10 RIVET BUSTER—3/4" stock, 3/4" x 1/4" edge, 10" long. Each.....



Now . . . a RED CAP for Your Tools!



Red Cap—Trade-Mark

Built for the Man Who Wants the Best

K-60 ROLL-CAB COMBINATION

Trade-Mark

WHEN you roll a beautiful, modern RED-CAP tool cabinet up to your customer's car—complete with Snap-on tools for every operation—it creates confidence in your ability—convinces the customer he came to *the right place.* This equipment is so far ahead of any other similar equipment that there is really no comparison. Look at the *size* of this Roll-Cab Combination . . . space is so divided that you have room for all your tools from ignition files to electric drills. Double weight steel is used to build these units with all ends and corners doubly reinforced . . . *it's built like an army tank for strength.* Modern in every way, Red-Cap Chests and Roll-Cabs with their attractive rich red finish and chromium and black handles and trim are the last word in modern design and utility. Set a new standard in your shop—with a RED-CAP.

K-60 —RED-CAP SUPERCHEST. Each.....
K-60 —Price West of the Rockies. Each.....
K-200—RED-CAP ROLL-CAB. Each .....
K-200—Price West of the Rockies. Each .....
K-260—RED-CAP COMBINATION. Each .....
K-260—Price West of the Rockies. Each .....



K-60 *RED-CAP* SuperChest Trade Mark

This big SuperChest will hold all your hand tools and keep them segregated the way you find most convenient for fast selection and easy checking. Folding front and dome are fitted with full length piano type hinges and two tumbler type locks. Side handles are chrome plated and are big enough for a "man's size" hand. Drawer handles are black bakelite and chromium. Drawer knobs chromium plated. Shipping weight 163 lbs., net weight 130 lbs. Size overall—16½" high, 30¾" long, 15¼" wide. Top compartment divided into four-sections . . . one section accommodates the KT-1R Tote Tray. Small drawers 3½" wide, large drawers 20½" wide. Welded together like a modern automobile body from unusually heavy gauge steel, this big chest with its many drawers and compartments will provide a safe, convenient holder for your tool equipment as long as you're in the business.

K-200 *RED-CAP* Roll-Cab

There's a lot of room in this big cabinet for those larger pieces of your equipment . . . four big, roomy drawers and an open section that will be just the place for electric drill, pulling equipment, or other large tools. Now fitted with 3" Silent Swivel Rubber Plate Casters, (a sturdier and more practical caster than shown in the above illustrations,) this cabinet rolls easily to any part of the shop—even when fully loaded.

Piano type hinges run full door length . . . handles are large, heavily chromium plated with tumbler type lock. Drawers pull easily on special skid channels. Height 30", length 32", width 16". Drawers are 2", 4", and 6" depths. Open compartment 9½" deep. Shipping weight 138 lbs., net weight 115 lbs.

For Twenty-five Years the Standard of Highest Quality

STOP COMMUTING . . . BUY A

ROLL-CAB COMBINATION

Take All Your Tool Equipment Over to the Job and Enjoy the Convenience of Single-Trip Service





Put your tool equipment on wheels. . . . Enjoy the convenience of having your entire tool outfit right where you work—whichever tool you need right at hand, easy to get at without constant shuttling back and forth to wall cabinet or bench.

NOW you can buy this sturdy combination in a choice of two finishes—whichever you prefer, at no extra cost. Designed to provide more usable room and greater utility, this outfit is so sturdily built and has so many advanced features you'll say that dollar for dollar *it's the best "tool-cab" of the times.*

Your Choice of two finishes now available in each of these units

CARDINAL RED—SMOOTH FINISH

SLATE GREY—WRINKLED FINISH



K-55-W and K-55-R Tool Chests

The drawers in these chests are arranged to provide the most convenient storage for your hand tools. Three small, shallow top drawers of equal size are ideal for holding calipers, micrometers, gauges, ignition and tappet wrenches, etc. Three wide drawers of varying depths give you plenty of room for your larger wrenches and hand tools, including those long sliding bars and nut spinner handles. Top compartment is divided to accommodate the Grey KT-1W or Red KT-1R Tote Tray. (Trays are not furnished as part of the chest.) All drawers fitted with "no-spill" slide runs . . . reinforced lid fitted with full length piano-type hinge and tumbler-type lock.

RK-50-W and RK-50-R Roll-Cabs

These big, roomy Roll-Cabs, designed as companions for the tool chests shown above are also available in your choice of finish . . . their big, roomy drawers and lower compartment will comfortably hold your larger pieces of equipment. The front panel locks in place to protect the entire contents and slides out of the way under the drawers when the cab is in use. The "no-spill" slide runs operate the drawers smoothly and easily without binding or warping. Even when fully loaded this combination rolls easily over any floor surface on big, easy-gliding casters. Sturdy swivel-type plate casters now used are a big improvement over the type shown in the illustrations. Spot welded, extra heavy gauge steel gives maximum rigidity and durability and a lifetime of tool handling convenience.

Stock Numbers and Descriptions

Number	Description	Price	West of Rockies
K-55-W	Chest (Grey Wrinkled Finish)		
K-55-R	Chest (Red Smooth Finish)		
KT-1W	Tote Tray (Grey Wr. Finish)		
KT-1R	Tote Tray (Red Smooth Finish)		
RK-50-W	Roll-Cab (Grey Wr. Finish)		
RK-50-R	Roll-Cab (Red Smooth Finish)		
RK-508-W	Combination Chest and Roll-Cab (Grey Wrinkled Finish)		
RK-505-R	Combination Chest and Roll Cab (Red Smooth Finish)		

KT-1R and KT-1W Tote Trays



A convenient tray for holding those tools that are actually in use. It has 3 socket sections and fits the top compartments in all Red-Cap Chests. Has a handy carrying handle.

Tool Chest Measurements

26" long x 12" wide x 15" deep

Top Compartments:
20½" x 8½" x 3½"
8½" x 5" x 3½"
25¾" x 3¼" x 3½"

Small Drawers:
10½" x 7¼" x 1"

Large Drawers:
all 24" x 10½"
and 1", 1¾" and 3¼" deep.

Shipping Weight: 70 lbs. Net 64 lbs.

Roll Cab Measurements

26¼" long x 18" wide x 20½" deep

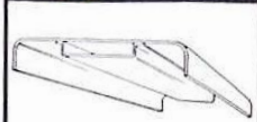
Drawers:
21½" x 16⅞" x 4"

Compartment:
26" x 17¾" x 8½"

Shipping Weight: 78 lbs. Net 68 lbs.

"No-spill" slide runs allow the drawers to operate easily without binding, and open to their full depth without sagging or falling and spilling their contents.

A steel channel beam welded inside the lid gives it unusual rigidity and structural strength — prevents warping the top or straining the full length piano-type hinge.

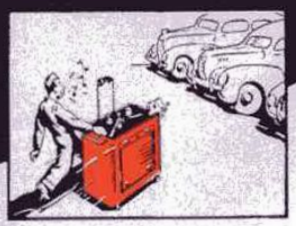


Note how the drawers will accommodate even those Heavy Duty bars and handles . . . keeps your entire tool kit safe and ready for use at all times. No need to leave long wrench handles lying around loose.





JUST "Rolla-Bench" to the job!



Work with half the effort . . . by taking your tools to the car in a smooth-rolling, step-saving ROLLA-BENCH.



Design Pat. No. 126,215

Here's *all the advantages of a portable work bench with all the conveniences of a fine tool chest* . . . ample facilities for the orderly arrangement of regular hand tools and plenty of storage space for bulkier pieces of equipment.

Stop taking up valuable floor space with cumbersome, old-fashioned wooden benches that become catch-alls for everything yet provide inadequate tool storage. Stop jockeying cars to the bench . . . *roll the bench to the job . . . service those cars on the spot where they stop.*

The rubber covered top is ruggedly built to afford a sturdy base for a vise and is fitted with a double electrical outlet for connecting electric driven equipment. The roll-front disappears into the back of the cabinet when opened and is locked in closed position with a tumbler type lock (see small illustration at right) . . . there are no doors to swing open or to dodge around while working. Quiet gliding "Baco" casters lock the Rolla-Bench where you work. Richly finished in red, baked-on enamel with chromium trim, Rolla-Bench modernizes your shop . . . its rugged construction assures lifetime service.



K-300
Rolla-Bench
Complete as illustrated and described.

SPECIFICATIONS

Overall Dimensions
Height—36"
Length—34"
Width—18"

Three Small Drawers	Bottom Long Drawers
Length—8½"	Length—26½"
Width—12½"	Width—12½"
Depth—1 1/16"	Depth—3 1/16"

Top Long Drawer	Open Compartment
Length—26½"	Length—34"
Width—12½"	Width—17"
Depth—1 1/16"	Depth—29"



Here is the simplest and most efficient door arrangement you'll find for any tool cabinet. No door panels to swing out and get in your way—no extra room required to open the door. The steel front rolls up easily and disappears inside the cabinet.

This work bench is always well-lighted . . . with an adustable lighting fixture that can be raised or lowered and tilted to suit your own needs. Supporting rods are chrome plated.

The convenience of a double electrical outlet is provided on the bench top so that a soldering iron, drill, valve refacer or other electrical tool may be used right on the bench. A connection plug in the base accepts an extension cord connection to the electric circuit.

"No-spill" slide runs allow the drawers to operate smoothly and easily without binding or warping, even when fully loaded, and to open to their full width without sagging or falling out.

These big "Baco" casters glide quietly over the shop floor and steer easily, even under a heavy load. Stoplox on the two rear casters lock the bench right where you need it.

For Twenty-five Years the Standard of Highest Quality

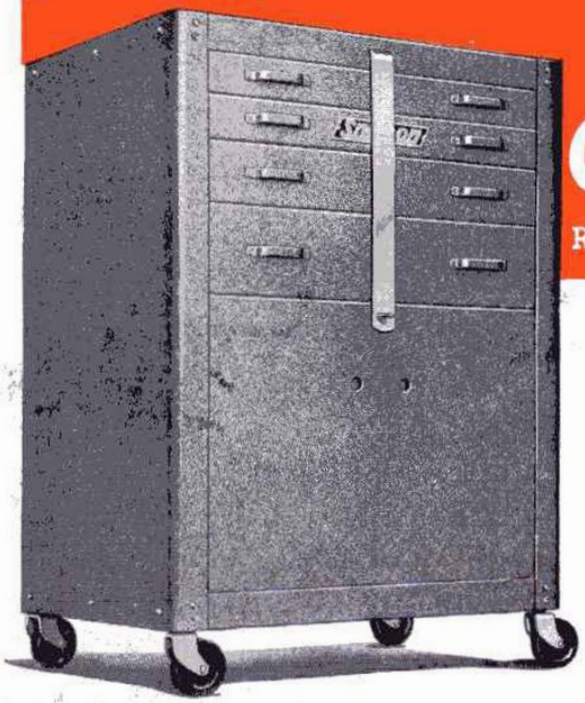
Metal Tool Chests

New . . . Modern . . . Practical . . .

Snap-on's K-77-W

COASTER-CAB

ROLLS RIGHT TO THE JOB!





IT'S *new* from *"top to bottom"* . . . there's nothing on the market anywhere so neat at anywhere near the price! For the mechanic who wants *the best at a moderate cost —here's the bench to buy.* Its distinctive styling, size, and construction make it a unit you'll be proud to own.

Get the most out of your floor space . . . stop taking up valuable room with unattractive, old-fashioned wooden benches . . . modernize your shop with roller bench convenience. Ruggedly built, this convenient roller bench holds all your tools and takes your bench to the spot where it's most needed—right at the job.

Four sturdy, roomy drawers give you plenty of room for wrenches and hand tools, even those long sliding bars and nut spinners, and for added convenience they're fitted with **"no-spill"** slide runs to assure easy opening at all times and to prevent drawers sagging or falling out.

A "drop-in" type front panel encloses the lower compartment and slides into a rack under the lower drawer when bench is in use . . . one padlock locks entire contents. The heavy gauge, flat metal top provides plenty of working bench space right at the job . . . oversize "Baco" casters (impervious to oil and grease) roll your "Coaster-Cab" easily and quietly to the job.

The attractive slate-grey wrinkled finish is oven baked at high temperatures to keep that "new appearance" indefinitely. Treat yourself to modern bench convenience . . . *stop jockeying cars to the bench—take the bench to the car.*

STOCK NUMBER AND SPECIFICATIONS

K-77-W—ROLLER BENCH	Price	Price West of Rockies

Available either Assembled or Knocked Down.

	Length	Width	Depth
Outside Measurements:	26½"	x 18½"	x 36"
Two Top Drawers:	21"	x 17"	x 2"
Third Drawer:	21"	x 17"	x 3"
Fourth Drawer:	21"	x 17"	x 4½"
Compartment:	26¼"	x 18¼"	x 14"

Net Weight: 142 lbs.
Shipping Weight: 162 lbs.

K-37 Coaster-Cab—A Quality Bench at a Price You Can Afford

If you want modern roller bench convenience at low cost, here's the unit you've been looking for. It's *a real roller bench value at a real dollar-saving price* . . . practical design, sturdy construction, roomy enough to hold your complete tool outfit. We've left off fancy trimmings, but we've given you a bench that will give you years of convenience both as a tool cabinet and as a work bench . . . body is reinforced, heavy gauge metal . . . drawers are spot-welded for rigidity . . . silent gliding "Baco" casters roll easily under heavy load. This bench is designed with open front and back; however, if you prefer a closed bottom compartment, a set of two panels is available to make it a fully enclosed bench. Front panel is hinged and slides under bottom drawer when not in use. Finished in smooth slate-grey oven baked enamel.



STOCK NUMBERS AND SPECIFICATIONS

K-37—ROLLER BENCH	Price	Price West of Rockies

Available either Assembled or Knocked Down.

KP-37—Set of two panels for above.....

	Length	Width	Depth
Outside Measurements:	24"	x 18¼"	x 34¾"
Drawers	19¼"	x 18"	x 3¾"
Compartments:	20"	x 18¼"	x 10½"

Net Weight: 83 lbs. Shipping Weight: 101 lbs.

SNAP-ON—BLUE-POINT TOOLS . . . *The Choice of Better Mechanics!*



THE RED-CAP MIDGET HOLD-ALL

Built to Hold a Complete Set of Midget Wrenches of All Types and Sizes for Ignition, Carburetor, Radio Service, Etc.

MORE small tools are lost, "loaned," or mislaid than are worn out . . . Protect *your* Midgets and have them always ready at hand in this new Snap-on case. Built to fill the need for a first-class safety box for small tool equipment . . . it's the first really quality box offered in this small size.

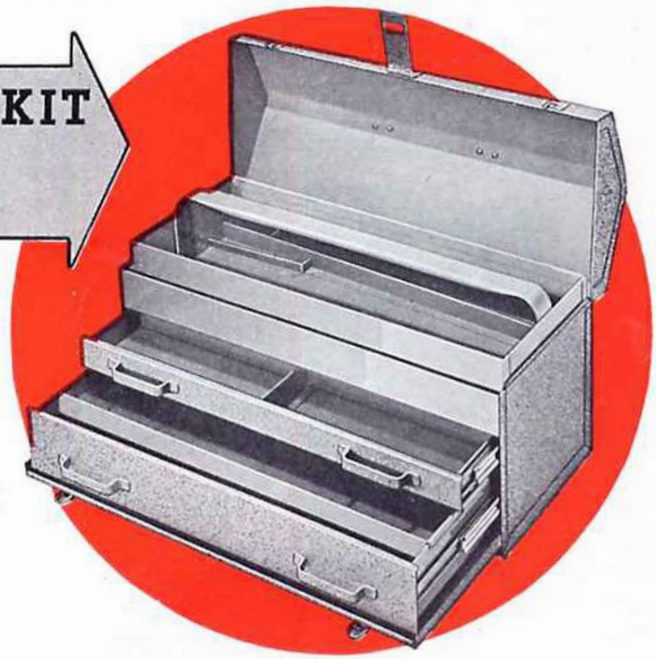
No drawers to pull out . . . no trays to remove . . . the top section moves back on special type carrier exposing the contents of lower compartment . . . all contents are visible at a glance and any tool removed without fumbling around. An ideal box for Radio, Typewriter, Dictaphone Servicemen, Projectionists, Electricians, Ignition and Carburetion Mechanics, or any man who has a kit of small tools to protect. Genuine tumbler type lock . . . two sturdy hinges . . . metal handle . . . spot welded construction and made of heavy gauge steel. Box is divided into ten compartments, and adjustable sliding walls help segregate units in the 2 socket sections. The bottom is big enough to hold chisels, punches, screw drivers, Ferret handles, etc. Size of box is 11¾" long, 7⅜" wide, 3½" deep.

K-65-R—RED-CAP MIDGET HOLD-ALL. Each.....

K-65-R—Price West of the Rockies. Each.....

K-21-W SNAP-ON MECHANIKIT

Size for size it tops 'em all for ruggedness and tool chest value



Compare this MechaniKit with any other tool box you can find at the same price, and you'll find none that can match its many worthwhile features . . . its convenience, rugged strength, and durability. The lid is gable shaped to give you maximum tool room . . . it's *built like a house for strength.*

The drawers are fitted with Snap-on's new "no-spill" slide runs which allow the drawers to open all the way—without sagging or falling out . . . they glide easily even when fully loaded. Bottom drawer has a sliding tray for your smallest tools, calipers, etc. The separate KT-1 carrying tray comes as part of the chest and has separate divisions for easy segregation of sockets, etc. . . . tray is 3¼" deep and has a strong full length handle. The outside of this tool box has the new wrinkled slate grey finish . . . a sturdy leather suitcase type handle and strong padlock hasp. Measurements—21" x 8¾" x 11¼". Top Compartment—3¾" deep; drawers—1⅜" and 3" deep. Shipping weight—33 lbs.

K-21—MECHANIKIT. Each .....

K-21—Price West of the Rockies. Each.....

For Twenty-five Years the Standard of Highest Quality

Metal Tool Chests



TAKE A TIP FROM AN OLD HAND

for real box value
get a Snap-on

K-23 W MechaniChest

It's top-notch value at
a reasonable cost



K-23
MechaniChest

K-23-W Snap-on MechaniChest

Registered U. S. Patent Office

YOU'LL get a mighty *lot of tool box satisfaction* when you decide on this Snap-on MechaniChest . . . it's one of the biggest tool chests in the line and has features that you'd only expect in a much more expensive unit.

Take those three long drawers, for example—here's length for even those long heavy duty handles, plenty of depth for your largest socket wrenches, and ample room for your complete tool equipment . . . in addition each drawer is fitted with *Snap-on's new "no-spill" slide run* that gives you an easy gliding drawer action at all times and allows you to pull each drawer all the way out and holds it there without letting it sag or fall out—it's one of the handiest features ever developed and makes it twice as easy to locate the tool you want.

The top drawer is sectionalized for segregation of small tools . . . the open top can accommodate the KT-2 Tote Tray (not furnished with box) or be used to hold tools actually in use. Strong trunk handles on each side provide a means for carrying the Chest . . . the lid and front panel both have a full length piano type hinge, and the contents can be securely locked by means of a padlock. Inside finish is smooth slate grey, and the outside has the new rich appearing wrinkled grey baked-on enamel finish.

Overall measurements—24" long, 9" wide, 11½"deep. Top Compartment—3" deep; drawers—1½", 2", and 3" deep. Shipping weight—39 lbs.

K-23-W—MECHANICHEST. Each.....

K-23-W—Price West of the Rockies. Each.....



KT-2 Tray

KT-2 Tote-Tray for K-22 and K-23-W

Fits inside the top compartment of the K-22 and K-23-W MechaniChest . . . handle is hinged and folds down when the chest is closed and snaps rigidly into carrying position when in use . . . Partitioned to accommodate socket equipment. A real addition to your MechaniChest.

KT-2—METAL TRAY. Each.....

KT-2—Price West of the Rockies. Each.....



K-22
MechaniChest

K-22 Snap-on MechaniChest

This is essentially the same box as the K-23-W shown above, but built a little smaller and a little lighter construction. At that, it's got plenty of room for a good size tool kit and long wrench handles.

It is offered for those thousands of mechanics who want the tool security a good box provides, but who do not feel they should go to the cost of the K-23-W above or other larger cases. The three drawers and top compartment give you plenty of space for segregating your tools, and the top will also accommodate the KT-2 Tote Tray. (Not furnished with box.) There are strong side handles for carrying, and the lid, hinged with three strong hinges, can be locked with a padlock. This chest measures 20¼" long, 8¼" wide, 10¾" deep . . . top is 2½" deep. Drawers are 1½", 2", and 3" deep . . . shipping weight, 30 lbs.

K-22—MECHANICHEST. Each.....

K-22—Price West of the Rockies. Each.....

SNAP-ON—BLUE-POINT TOOLS . . . *The Choice of Better Mechanics!*

MechaniKits...

Built to Give You the Biggest Box Value for Your Money



- Extra heavy gauge steel for strength
- Spot-welded for lasting rigidity
- Furnished with special tool carrying tray

K-25

Built to give you a good, big tool chest at extremely low cost . . . without fancy plating and expensive trimming but built of real heavy gauge steel, spot-weld construction, and with the convenience of a separate tote tray furnished complete with either of these two boxes. Here is real box value—the K-25 is the larger of the two, but either one is big enough to hold the average wrench and hand tool kit.

Stock Numbers and Specifications

K-25—MechaniKit

Measures 21¼" x 8¾" x 7⅛". Tray 20¼" x 8" x 3¼". Three good hinges, large leather handle grip, two fasteners, and padlock hasp. Smooth grey enamel finish. Shipping weight. 15½ lbs.

K-25—MechaniKit. Each.....
K-25—Price west of the Mississippi..

K-24—MechaniKit

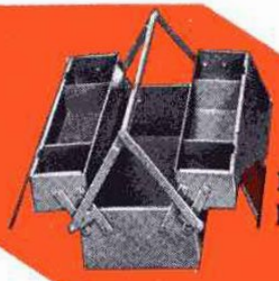
Measures 20" x 7¾" x 5½". Tray 19" x 7" x 2½". Two strong hinges, large carrying handle, two snap fasteners, and strong hasp for padlocking. Smooth grey enamel finish. Shipping weight, 13½ lbs.

K-24—MechaniKit. Each.....
K-24—Price west of the Mississippi..



K-24

Snap-on Handikits



K-9 Junior Handikit

K-9 Junior Handikit

Designed for the junior mechanic or apprentice who is just beginning to build up his set. Don't let your valuable tools lie around or get mislaid amongst miscellaneous odds and ends. Start right now to get every dollar's worth of work value out of them . . . keep them safe in a good box. There's a lot of room in this Handikit, and the top compartments are useful for sockets, etc. Built of heavy steel . . . substantial . . . durable. Finished in grey enamel. Size overall is 14" x 8" x 6". Shipping weight—7¼ lbs.

K-9—JUNIOR HANDIKIT. Each.....
K-9—Price West of the Mississippi .....

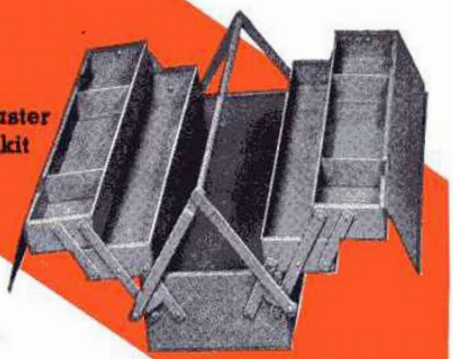


K-10 Senior Handikit

K-10 Senior Handikit

This is a little bigger than the K-9 and will naturally hold a few more tools . . . if you intend to add new units to your kit, it would be advisable to get as large a box as you can afford. This one is sturdily built and a real buy for any mechanic. Size overall is 16" x 8" x 7". Shipping weight—10½ lbs.

K-10—SENIOR HANDIKIT. Each.....
K-10—Price West of the Mississippi.....



K-11 Master Handikit

K-11 Master Handikit

The mechanic whose intentions are to build up a first-class tool kit will give serious consideration to the box he buys. He will get the biggest and strongest his circumstances allow . . . a box that holds only half his tools is of very doubtful value. This splendid folding box affords a lot of room, plus the conveniences of having all tools visible for easy grasping. A slight pressure on the handle opens it . . . it closes itself when you lift the handle. Size overall is 19" x 8" x 7¾".

K-11—MASTER HANDIKIT. Each.....
K-11—Price West of the Mississippi.....

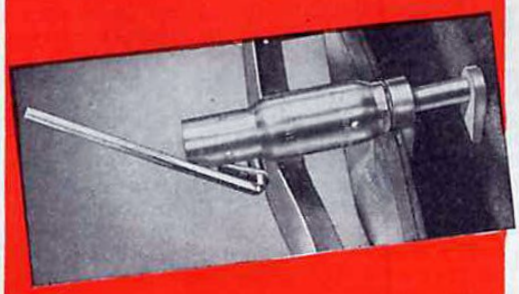
For Twenty-five Years the Standard of Highest Quality

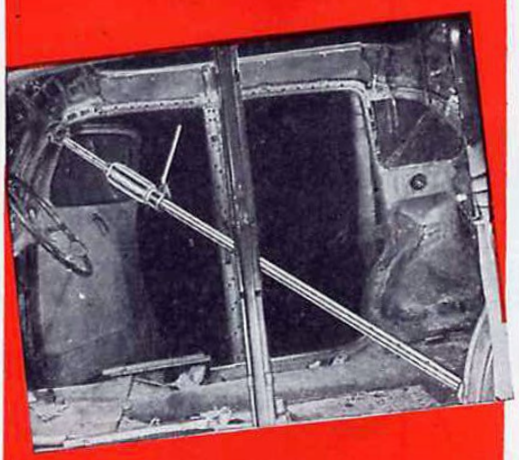
Snap-on Hydra-Pak

10-TONS OF STEADY HYDRAULIC POWER . . . CONTROLLED PRESSURE TO THE FRACTION OF AN INCH









for FASTER, EASIER BODY and FRAME STRAIGHTENING

No Hose . . . No Motors . . . No Remote Power Connections

Now you can make more out of body and frame straightening jobs . . . with HYDRA-PAK, the new, easy Snap-on way to apply hydraulic power with greater speed and accuracy. Using HYDRA-PAK is as simple as using a hand jack—the hydro-unit is right in front of you, *on the tool itself*, where you can regulate power as you watch the job . . . where one man can handle the tool and job all by himself and do better, faster work because he can *see* what he does as he does it. HYDRA-PAK has no hose for transmission of fluid, no motors, no remote power connections.

The Right Pressure Always . . . Because You Always See the Work!

HYDRA-PAK gives you precision *hand-control* of 10 tons of power, applied through various combinations of specialized attachments to push, pull, bend, spread, press, lift, and clamp . . . controlled power for every operation necessary in body rebuilding work. Cutting power is like shutting a valve . . . the "push" stops instantly, no easing off, no over riding. HYDRA-PAK also *retracts automatically* . . . no pulling or pushing to get the ram back to its starting point—these features alone are worth hours of shop time in labor saving and finer workmanship.

Special "Hydra-Pak" Features

10-Ton Hydra-Ram

The flexibility and efficiency of HYDRA PAK is the new Snap-on *10-ton Hydra-Ram*—a self-contained hydraulic power unit that exerts tremendous power—that requires only one operator—that requires no hose for transmission of fluid—that will operate at full power at any angle between vertical and horizontal.

Timkin-Shelby Extension Tubes

All HYDRA-PAK extension tubes are made of *Timken-Shelby Seamless Steel Tubing*, laboratory tested to withstand maximum pressures, plus. Extensions are quickly and easily attached to the Hydra-Ram by means of free-turning threaded ends that are protected against burring by a special safety step at the end of the thread.

Alloy Steel Attachments

Malleable and special alloy steels are used in all HYDRA-PAK attachments and pads, and the castings are carefully machined and surface-finished to assure safe, dependable operation and long service life . . . every necessary type of attachment is included, and hundreds of different combinations and set-ups to fit every type of job can be made in a minimum of time. These attachments are threaded to fit the Hydra-Ram, and outer ends of threads are protected by a recessed safety step.

Kwixtension With 14 Positions

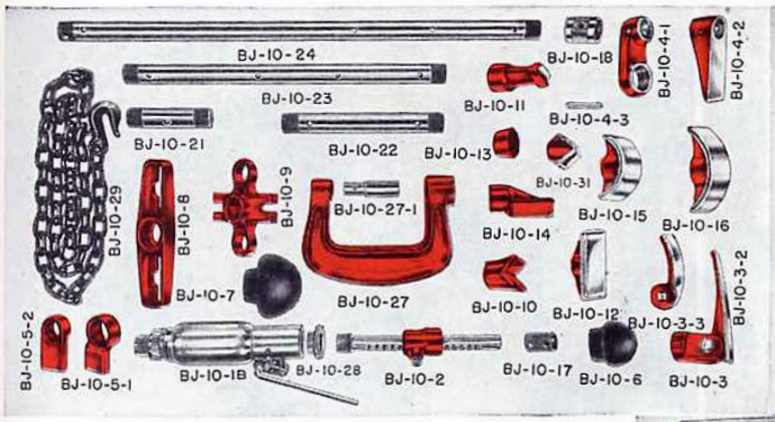
An exclusive HYDRA-PAK feature is the new Snap-on Kwixtension—a special attachment that provides a lightning-fast extension of tubes when making a set-up on the job. This attachment provides an *additional eight inches of tube length* with *fourteen* stop positions before a change-over of extension tubes is necessary. You simply slide it out to the best stop position and then use the Hydra-Ram . . . to return, just lift the knurled knob and slide the Kwixtension back into the tube.

Adjustable Body Spoon

HYDRA-PAK also includes a new adjustable spoon with 2 interchangeable blades that can be swung to 12 different positions . . . adjustments can be made without having to remove the set-up from the car. Simply push out a locking pin, adjust the spoon blade to the position required and replace the locking pin. It's a big time-saver, as the position of the blade can be gradually adjusted to push out a panel to its previous contour.

Complete With All Attachments

The Snap-on HYDRA-PAK comes complete with the entire selection of parts and attachments shown on the next page . . . several of them are included in duplicate, as some jobs require two of the same parts to do the job properly. It gives you everything you need to handle any kind of body and frame straightening work.





HYDRA-PAK SETS

BJ-10	Body Shop Set in Wooden Box..
BJ-10-B	Body Shop Set in Body-Kab.....(S)
KR-790	Body-Kab for BJ-10.....(S)
BJ-10-M	Basic Shop Set in Wooden Box..
BJ-10-J	Car Dealers Set in Wooden Box.

Parts Price List

List of Hydra-Pak Parts			Contents of Sets		
Stock No.	Description	Price Each	BJ-10 Set	BJ-10-M Set	BJ-10-J Set
★BJ-10-1B	Hydra-Ram Power Unit.		x	x	x
BJ-10-2	Kwixtension		x	..	..
BJ-10-3	Adj. Body Spoon Complete with BJ-10-3-2 Lg. Dolly Blade		x	x	x
BJ-10-3-3	Sm. Dolly Blade for BJ-10-3 Adj. Spoon		x	..	..
BJ-10-4-1	Ext. Tube Clamp Head		x	x	..
BJ-10-4-2	Clamp End Toe		x	x	..
BJ-10-4-3	Clamp Toe Lock Pin		x 2incl	x 2incl	..
BJ-10-5-1	Spreader Toe		x	x	..
BJ-10-5-2	Spreader Plunger Toe		x	x	..
★BJ-10-6	Plastic Pad (Sm.)		x	x	x
★BJ-10-7	Plastic Pad (Lg.)		x	x	..
BJ-10-8	Chain Pull Plate (Lg.)		x	..	..
BJ-10-9	Chain Pull Plate (Sm.)		x 2incl	..	..
BJ-10-10	90° V-Base (Lg.)		x	x	x
BJ-10-11	90° V-Base (Sm.)		x 2incl	..	..
BJ-10-12	Flat Base Pad		x	x	x
BJ-10-13	Serrated Plunger Saddle		x	x	x
BJ-10-14	Wedge End		x	x	x
BJ-10-15	3" Radius Pad		x	x	..
BJ-10-16	5" Radius Pad		x	x	x
BJ-10-17	Pad Coupler		x	x	x
BJ-10-18	Tube Coupler		x	x	x
BJ-10-21	6" Seamless Steel Ext. Tube		x	x	x
BJ-10-22	12" Seamless Steel Ext. Tube		x	x	x
BJ-10-23	24" Seamless Steel Ext. Tube		x	x	x
BJ-10-24	36" Seamless Steel Ext. Tube		x	x	x
BJ-10-27	"C" Clamp		x	..	..
BJ-10-27-1	"C" Clamp Adaptor		x	..	..
BJ-10-28	Hydra-Ram Base Plate		x	..	..
★BJ-10-29	Special ⅜" Alloy Chain		x 2incl	..	..
BJ-10-31	Angle Base Pad (90°)		x	x	..

Hydra-Pak Guarantee

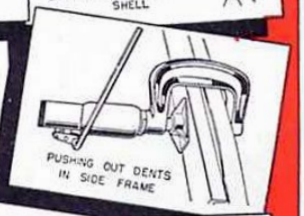
All Hydra-Pak Parts and attachments (except the Hydra-Ram, Plastic Pads, and chains) carry a guarantee against defects in workmanship and materials. Because of their construction the Hydra-Ram and plastic pads are warranted for a period of 90 days from date of purchase. The chain is not guaranteed.

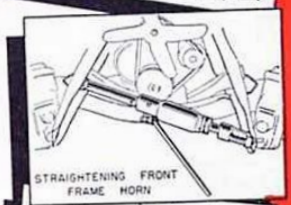
KR-790 BODY-KAB for the Snap-on HYDRA-PAK

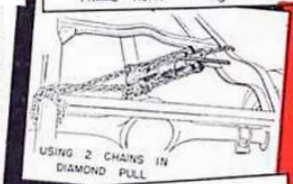
Built expressly to accommodate the HYDRA-PAK and other body tools and to give you a portable work bench all in one sturdy, modern-looking piece of equipment . . . every unit handy in a hurry. Fitted with four silent, easy-rolling rubber casters . . . chrome plated handles. Heavy gauge steel, spot-welded construction. 17" wide, 35½" long, 31½" high.

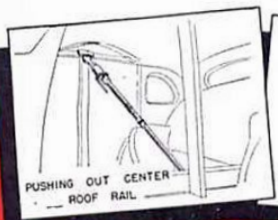
Hydra-Pak Adaptations

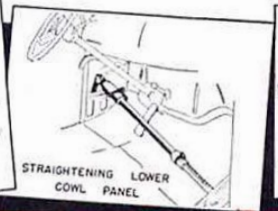
The applications illustrated are made from actual photographs taken on the job . . . they show merely the fundamental set-ups which demonstrate ways to use HYDRA PAK. The range of combinations and uses is unlimited in the hands of a mechanic who understands the basic principles of body and frame reconstruction. Combinations can often be set up, ready for action, in less than a minute—a factor that means **increased efficiency and profits to you.**

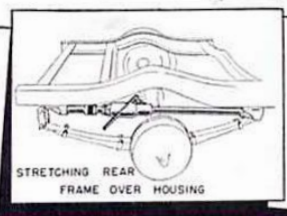


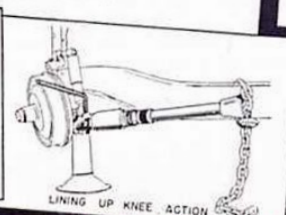


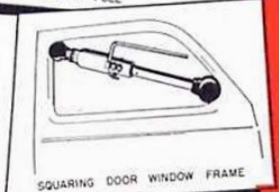








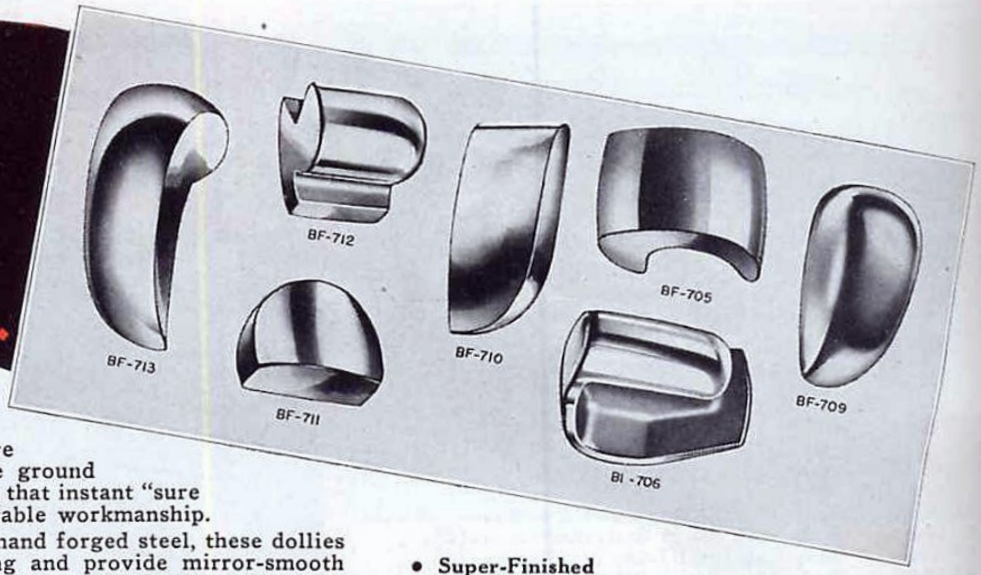




For Twenty-five Years the Standard of Highest Quality

Body Repair Tools

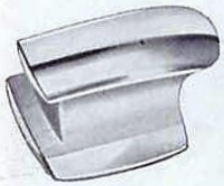
NEW DOLLIES for the NEW CURVES...



AS streamlined as the curves they're made to match, and full surface ground and polished, Snap-on Dollies give you that instant "sure fit" that means faster and more profitable workmanship.

Precision built of specially tempered hand forged steel, these dollies hold their shape in the hardest going and provide mirror-smooth working surfaces that help ease out body and fender dents into their original smooth flowing contours.

- Super-Finished
- Mirror-Surfaced
- Fit Any Curve



BF-714—ANVIL DOLLY. Its wide curved face fits the contours of practically all portions of the body and door panels, as well as providing an ideal surface for most fenders. The small oval works perfectly on outside curves where a hammer is used on the inside of the work. We believe it is the most essential all around dolly block ever made. 4" long, 2¾" wide, 2⅛" high. Anvil faces—1¾x4"; 2¾x3". Weight—2 lbs. 14 oz. Each.....

BF-705—FENDER DOLLY. For fenders with rolled edges and beads. The small curved end works perfectly under the rolled edge. 3¾" long, 2¾" wide, 1⅞" high. Weight—2 lbs. 14 oz. Each.....

BF-706—ANVIL BLOCK. Curved to fit the contours of late models . . . the special shape provides a good hand hold . . . protects the hand when heat is applied. 4" long, 2 11/16" wide, 3" high. Weight—3 lbs. 12 oz. Each.....

BF-709—BAR DOLLY. A good general block for all around use . . . provides flat and rounded surfaces. 4½" long, 2⅜" wide, 1½" high. Weight—3¼ lbs. Each.....

BF-710—TOE DOLLY. The many curves and edges on this tool fit a great many of the odd curves found on streamlined cars. 4¾" long, 2¼" wide, ⅞" high. Weight—2 lbs. 2 oz. Each.....

BF-711—HEEL DOLLY. A good basic tool . . . handles a majority of jobs on all cars old and new. 3" long, 2¼" wide, 1⅜" high. Weight—2¼ lbs. Each.....

BF-712—GENERAL PURPOSE DOLLY. Useful for deep skirted fenders . . . semi-flat surface is useful for shrinking work where heat is used. 3" long, 2¼" wide, 2¼" high. Weight—2¾ lbs. Each.....

BF-713—WEDGE DOLLY. An ideal tool for working on late model streamlined cars. Tapered wedge is useful for many jobs where other blocks cannot be used. Top surface is arched and the block gives a wide choice of curves. 5½" long, 2⅛" wide, 1⅝" high. Weight—3¼ lbs. Each.....



LONG CUTS *Easy*

Pat. No. 2,199,360







with New Snap-on Body Panel Cutter

BUILT on a principle which *avoids shearing and chiseling*—cuts a clean edge on every stroke. Just the thing for turret top sections, trunk sections, door panels—all those difficult body jobs where long lengths of metal must be cut. *Reaches out-of-way places* where shears won't work, and makes curved, crooked or straight cuts with pocket-knife ease. Cuts through the heaviest body-steels easily with successive hammer blows on the anvil end of the tool. Because of the clean edge it leaves, it is especially valuable on jobs where a section of panel is removed and then replaced with new steel welded in place.

Made from best grade chisel steel with interchangeable cutting blades of finely tempered spring steel. It's the work of a few seconds to replace the blade in the event that it gets broken . . . and it's a good idea to have an extra blade on hand—just in case.

★**BF-708-B—PANEL CUTTER.** Complete with one blade.....

★**BF-708-A-2.** Additional blades. Each..

The above illustrations show how the Panel Cutter was used to cut out an entire side panel which was too badly smashed to repair. A new panel is quickly welded into position with the clean cut body.

SNAP-ON—BLUE-POINT TOOLS . . . *The Choice of Better Mechanics!*

for easier, faster body bumping, use

Blue-Point HAMMERS

FUNCTIONALLY DESIGNED FOR BETTER PERFORMANCE ON EACH SPECIFIC OPERATION

BETTER THAN PRE-WAR QUALITY

ALLOY STEEL HEADS . . . SUPER-FINISH FACES

Once again we are able to offer you a complete line of Blue-Point Body and Fender Bumping Hammers. Built in similar patterns as our popular prewar models, but constructed of higher grade materials, the new line provides the very finest tools of their type. Hammer heads are forged from special high grade alloy steel, heat treated under electrically controlled preciseness to give the exact combination of hardness and toughness required for the work. Working faces are polished to glass-like smoothness, while the body of the hammer head has an attractive rich red finish.

Retire those war-wrecked old timers . . . equip yourself with a complete series of Blue-Point specialized body hammers and get the maximum result from every hammer blow. *Treat yourself to easier dent dinging.*

OCTAGON GRIP HANDLES OF FIRST GRADE HICKORY

Handle construction aids the hammer efficiency. To keep the tool from slipping . . . to help you hit the work exactly right, the handles for this line have an octagon shaped hand grip. These hammer handles are shaped from the finest available first grade white hickory.



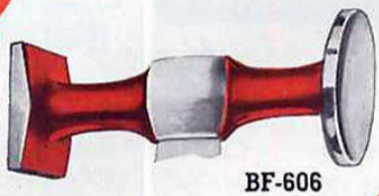
BF-603



BF-613



BF-604



BF-606



BF-610



BF-608



BF-612



BF-611

BF-603 Long Low Spot Pick Hammer. A very useful pick punch used to bump out small, low spots while filing. It will pay for itself in the amount of solder saved. This pick hammer is especially recommended for use wherever the metal is covered with sound-proofing material, such as tops, bodies, and doors. 6⅛" long. $1\frac{19}{32}$" round face. Pick tapers to a 1/16" point from a 7/16" base. Weight—12½ oz. Each.....

BF-604 Wide Nose Cross Peen Hammer. An excellent tool for finishing operations. The cross pein end is useful for working in sharp corners, around mouldings, and for calking. 5½" long, 1⅝" round face, peen end ⅝" wide, 1/16" thick, weight—11½ oz. Each....

BF-606 Wide Face Shrinking Hammer. The wide faces of this hammer are essential for shrinking operations on heated metal panels. Both faces have an absolutely flat surface to prevent any stretching of the soft metal. The tool is also useful for panel bumping jobs. 4¼" long, 1⅞" round face, 1⅝" square face, weight—17 oz. Each.....

BF-608 Short Curved Cross Peen Hammer. Made with a curved peen end for use under rolled edge fenders. It has a perfect finishing face for use as a regular dinging hammer. $5\frac{5}{16}$" long, 1⅝" round face, ⅝" by 1/16" peen end, weight—11½ oz. Each.....

BF-610 Cross Milled Shrinking Hammer. An extra wide face hammer with serrated surfaces for shrinking and working large surfaces which are badly stretched. The cross milled heads knead the metal and work it back into shape without heat . . . providing an efficient and fast method of shrinking. 4¼" long, 1⅞" round face, $1\frac{9}{16}$" square face, weight—17 oz. Each.....

BF-611 Picking and Dinging Hammer. (small size) For smoothing out small dents and for general dinging work. 4" long, $1\frac{15}{32}$" round face, 1/16" point tapered from a 7/16" base, weight—½ lb. Each.....

BF-612 Light Bumping Hammer. Correct design, weight and balance for work on late model cars having fenders of lighter weight steel. 4" long, $1\frac{3}{16}$" round face, $1\frac{1}{16}$" square face, weight—9 oz. Each .....

BF-613 Large Dinging Hammer. The largest of our dinging hammers. 6" double-faced head with one face 1¼" diameter striking surface, the other 1½" diameter. Weight—13 oz. Each.....

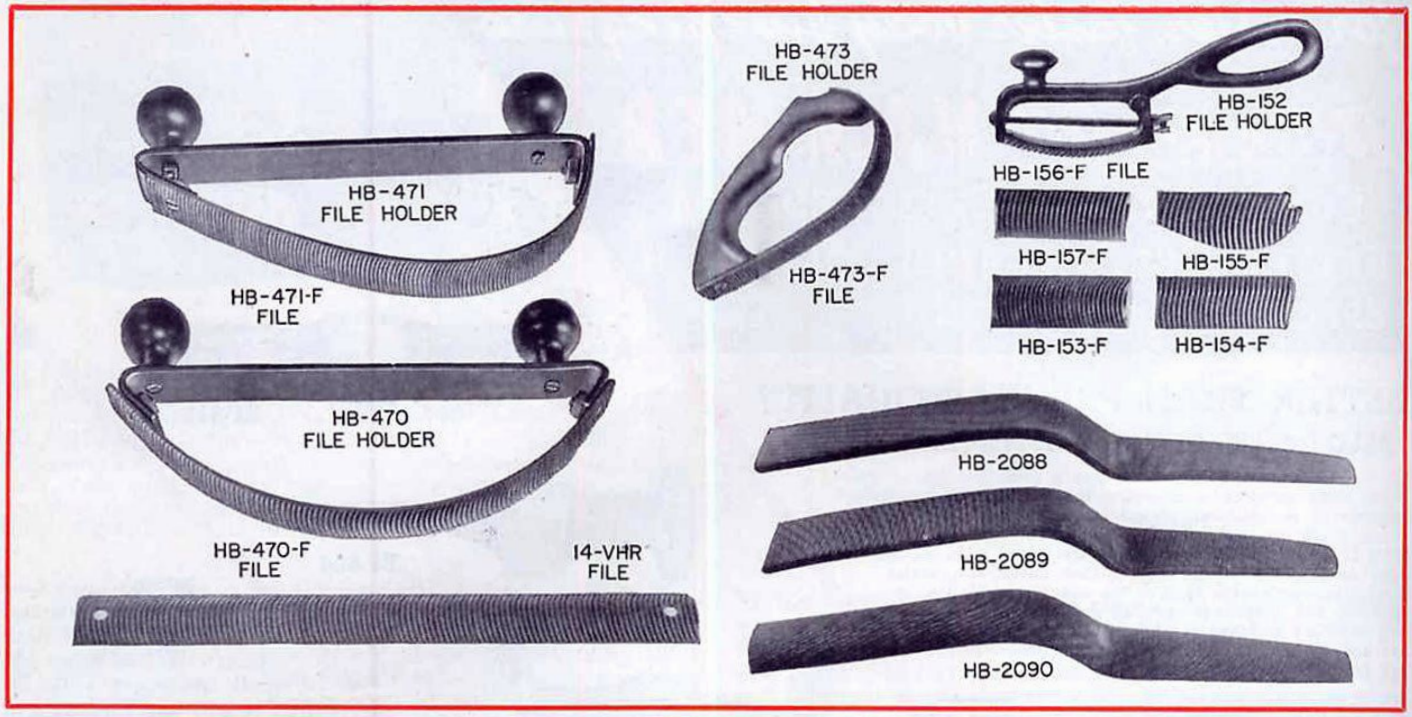
Extra Handles for Use with Above Hammers:

BF-603-2 for use with hammers BF-603, BF-604, BF-606, BF-608, BF-610, BF-613. Each.....

BF-611-2 for use with hammers BF-611, BF-612. Each .....

For Twenty-five Years the Standard of Highest Quality

BODY AND FENDER REPAIR FILES



Vixen Shell Type Half-Round File

This file meets all conditions where a milled-tooth half-round file is required, and can be used on bearing work or on body work. Teeth are standard cut 8 teeth per inch and are cut on convex side only. File length is 14" and it can be readily attached to the BF-775-A File Holder listed in opposite column.

★14-VHR—SHELL TYPE HALF-ROUND FILE. Each.....

Vixen Half-Circle File and Holder

This file is used on fenders and contours where a forward stroke is more convenient, and has teeth on the convex side only. Standard cut.

★HB-470-F—FILE. Each.....
HB-470 —HOLDER FOR ABOVE FILE. Each.....

Special Vixen Curved File

A rigid file with teeth on one side only, 14" long, standard cut teeth. It has been designed particularly for use on fenders and fender wells. Flexible files will not handle such short curves.

★HB-471-F—FILE. Each.....
HB-471 —HOLDER FOR ABOVE FILE. Each.....

Special Window-Reveal File

This little file is for use on new streamlined bodies. It is 5/8" wide and will get in all the small corners. Flat shape, teeth on one side only.

★HB-473-F—FILE. Each.....
HB-473 —HOLDER FOR ABOVE FILE. Each.....

Vixen Reveal Tool Set

This is one of the most useful sets available for body and fender work. It smooths out ledges and corners without damage to other parts. Set includes:-

★HB-153-F—HALF-ROUND, SHELL FILE. Each.....
★HB-154-F—FLAT, SQUARE-CORNERED FILE. Each.....
★HB-155-F—FLAT, ROUNDED EDGE FILE. Each.....
★HB-156-F—HALF-ROUND, BENT SHELL FILE. Each.....
★HB-157-F—HALF-ROUND, MOULDING FILE. Each.....
HB-152 —HOLDER FOR ABOVE FILES. Each.....
★HB-606 —COMPLETE SET.....

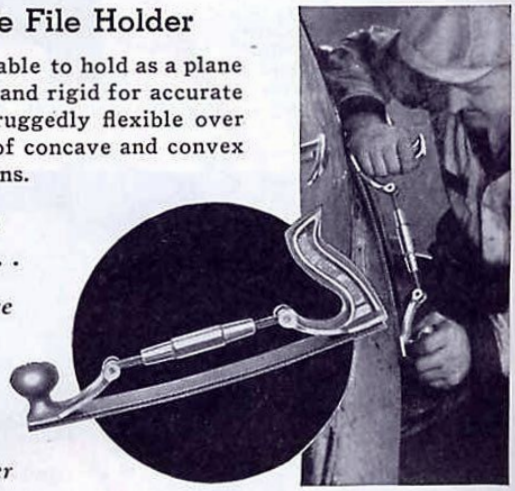
Bumping Files Set

These files are 12" long and 1 3/8" wide, and are used like hammers with dolly blocks to slap out dents in bodywork. They do not expand the metal but rather tend to contract to original shape.

★HB-2088—FLAT, COARSE CUT FILE. Each.....
★HB-2089—FLAT, MEDIUM CUT FILE. Each.....
★HB-2090—HALF-ROUND MEDIUM CUT FILE. Each.....
★HB-303 —COMPLETE SET. Each.....

Here are the files you need to handle all those different body and fender jobs . . . they are designed to just the right curves for fast, accurate finishing and are made of the finest type of steel, heat treated to give maximum cutting life to the teeth.

Flexible File Holder



AS comfortable to hold as a plane . . . light and rigid for accurate gauging . . . ruggedly flexible over a wide range of concave and convex filing operations.

Adjusts to all Positions . . .

Speeds Service

Saves Your Hands . . .

Eliminates File Chatter

Its generous size handles of aluminum alloy provide ample grip for even extra large hands . . . high clearance turnbuckle protects your knuckles . . . heat treated turnbuckle screws insure positive adjustment . . . hinges are chatter-proof. A permanently attached strap takes 14" files and holds the tool together while file is being attached.

★BF-775-A—"PLANE" TYPE FILE HOLDER. Each..

★14-V—FLEXIBLE CURVED TOOTH FILE. 8 Teeth Per inch. Each.....

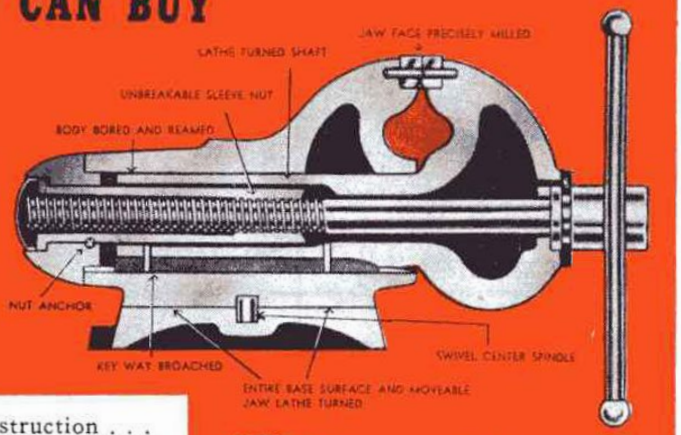
★V-14-7—FLEXIBLE CURVED TOOTH FILE. 7 Teeth Per inch. Each.....

THE FINEST VISE YOUR MONEY CAN BUY

NOW AVAILABLE FROM **Snap-on**

The WILTON PRECISION SCREW VISE

Compare Its Superior Construction Features With Any Other Vise on the Market . .



FROM every standpoint—appearance . . . engineering . . . construction . . . durability . . . utility—the Wilton stands out as *the finest Vise available anywhere.* Compare its many construction features with any other vise on the market and you'll be convinced of its superiority. Rid yourself now of inefficient vise troubles . . . install a Wilton Precision Vise in your shop, the vise that assures you *satisfactory service over years of constant use.* Order from the nearest Snap-on Branch listed in the back of this catalog or from the Snap-on representative calling on you.

MANY SUPERIOR CONSTRUCTION FEATURES

UNBREAKABLE SLEEVE NUT: Horizontally anchored, unbreakable malleable sleeve nut is entirely closed . . . filings cannot clog the threads.

POSITIVE ACTION—NO SIDE TWIST: Precise machining of fine square faced threads on the alloy steel spindle and the sleeve nut, the horizontal nut anchoring and the hardened thrust bearing plate all contribute to give immediate wobble-free vise action. A steel key and keyway machined to .002" tolerance guides the moving head and prevents side twist.

GREATER HOLDING POWER: The long distance between the sleeve nut flange and the spindle thrust bearing plate, and the short distance between spindle and jaws contribute to tremendous gripping power.

UNSURPASSED PRECISION: Every part of a Wilton Vise is machined and fitted to extremely close tolerances. Main body parts are bored and reamed and are entirely enclosed to prevent entry of filings, etc.

LATHE TURNED SHAFT: Moveable head shaft is lathe turned to provide a truly smooth action within the reamed body cylinder.

INTERCHANGEABLE, REVERSIBLE JAWS: Standard for these vises are high grade serrated steel jaws, but your vise can be furnished with precisely ground soft, or hardened, steel jaws at no extra charge, if you specify this change on your order. Extra jaws can also be furnished—see specifications.
Standard steel jaws are up to .060" deep case hardened and carburized and tested by 55-58C Rockwell. All jaws are surface ground to align perfectly with each other. Sizes 2" to 5" inclusive, have a fine parallel surface serration . . . size 6" has a rougher diamond serration.

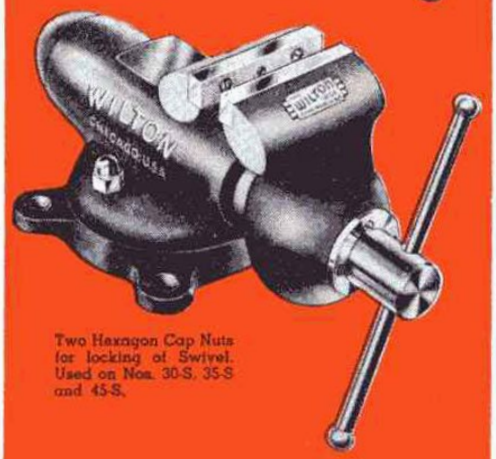
SWIVEL FACES LATHE TURNED: Faces of body and base are lathe turned to give a smooth riding action and the body is centered on a short base post spindle. Two lock bolts hold the vise at any degree on the circle. Four base lugs provide means for securely bolting the base to your bench.

ANVIL TOP SURFACE GROUND: Nothing is overlooked that will help to make this vise the best there is. The surface ground anvil is a refinement especially appreciated when fine, intricate jobs are being handled.

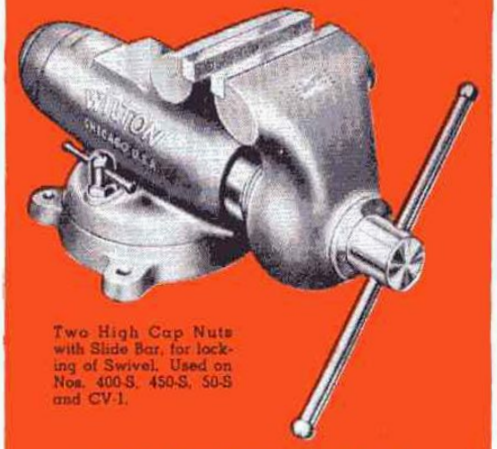
VIBRATION PROOFED—LIGHT WEIGHT: Ideal for fine and intricate jobs in tool shop and assembly because the precision construction and the hollowed heads reduce vibration to the absolute minimum. Unnecessary dead weight is eliminated by the hollow design of the high tensile alloy body and moveable malleable iron head.

MODERN DESIGN: Not only is it the best—it looks like the best vise you can buy. Its smooth flowing lines combine functional superiority and modern designing.

PRACTICALLY INDESTRUCTIBLE: The malleable alloy moveable head and the high tensile alloy steel stationary head have such inherently strong characteristics that it is practically impossible to smash them. Every Wilton Vise carries an unrestricted five-year guarantee. Defective vises will be repaired or exchanged gratis within this period. We are not responsible, however, for freight charges involved in such cases.

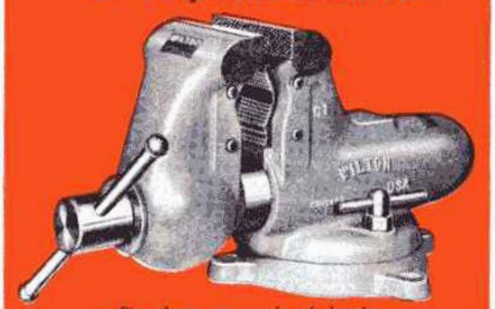


Two Hexagon Cap Nuts for locking of Swivel. Used on Nos. 30-S, 35-S and 45-S.



Two High Cap Nuts with Slide Bar, for locking of Swivel. Used on Nos. 400-S, 450-S, 50-S and CV-1.

CV-1 Pipe and Bench Vise



Pipe Jaws are made of deeply case hardened steel, individually milled to give sharp, strong gripping teeth.

SIZES AND SPECIFICATIONS

With Swivel Base		Without Swivel		Furnished with Standard Serrated Jaws					Jaws Only—Per Pair		
Vise No.	Price Each	Vise No.	Price Each	Width of Jaws	Maximum Opening	Depth of Throat	Dia. of Spindle	Weight with Swivel	Smooth No.	Serrated No.	Price Per Pair
30-S		30-N		3"	4½"	2 5/16"	⅝"	23 Lbs.	30S-1	30S-2	
35-S		35-N		3½"	5"	2⅝"	¾"	35 Lbs.	35S-1	35S-2	
40-S		40-N		4"	5¼"	2⅝"	¾"	39 Lbs.	40S-1	40S-2	
400-S		400-N		4"-H.D.	7"	3"	⅞"	50 Lbs.	400S-1	400S-2	
450-S		450-N		4½"-H.D.	8½"	3⅞"	⅞"	61 Lbs.	450S-1	450S-2	
50-S		50-N		5"	8½"	3⅞"	⅞"	64 Lbs.	50S-1	50S-2	
*CV-1		.....	.....	4½"	5½"	4½"	⅜"	68 Lbs.	CV-1-1	CV-1-2	
*This combination Pipe and Bench Vise holds pipes ⅜" to 3½" O.D.									CV-1-P Pipe Jaws		

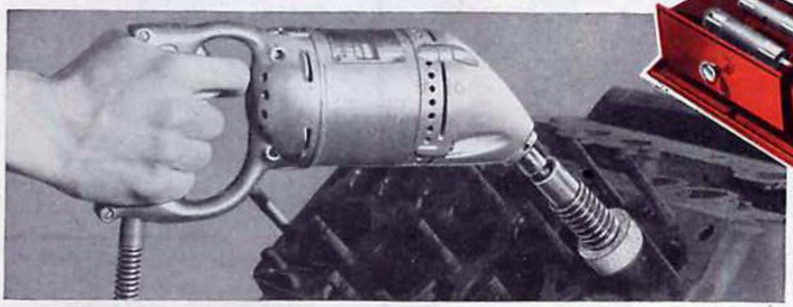
For Twenty-five Years the Standard of Highest Quality

Blue-Point VALVE SEAT GRINDER

A Fast and Accurate Resurfacer For Hard and Soft Valve Seats



IF you've been looking for an *easier, better way to grind valve seats,* try this Blue-Point Valve Seat Grinding Set. Here's an outfit that handles both hard and soft seats and is so simple to use that any mechanic can turn out valve jobs equal in fit and finish to factory standards.



Blue-Point Heavy Duty Angle Drive Motor is a remarkably fast and accurate tool . . . there are no complicated parts to set up, operate, and maintain. The features listed below all contribute to a perfect job and give you *Stone Grinding at its finest.*

HIGH SPEED ANGLE DRIVE
for clearing obstructions

An important feature of the Blue-Point motor is the built-in angle drive that gets under hood obstructions . . . permits accurate grinding from any angle. The powerful high-speed motors are equipped with high-grade ball bearings on both armature shaft and drive spindle . . . grease-sealed for life and permanently lubricated. (Gear housing should be lubricated.) D.C. or A.C. up to 60 cycles (other voltages available on special order). VG-10 included in VG-100-B Set has a no-load speed of 13,000 R.P.M. and power to maintain constant high speed for good work on hard seats. Takes up to 2⅝" stones.

HEX DRIVE ADAPTOR
for flexible and positive power

Power is transmitted through a hex-ball drive which snaps into a retaining spring in the stone carrier, *allowing flexibility without danger of binding* the carrier on the pilot . . . the tension lets you clear the work before stopping the motor—preventing marring of the finished seat.

BLUE-POINT PILOTS
quickly and accurately centered

The self-energizing pilots *lock securely and center correctly,* because each segment acts independently, compensating for wear in its own portion of the guide hole . . . accommodate guides worn up to .008". Time-saving pilot shifting wrench is also included in the set.

STONE CARRIERS
pre-oiled bearing for long service

This Blue-Point set includes two stone carriers, one for a rough stone and one for a finishing stone. The socket in the stone carrier is *spring mounted* to allow a vertical vibrating action of the stone which with the centrifugal force throws out the grindings and prevents undue pressure on the stone. Oilite bushings in the carrier require no lubrication and assure long, trouble-free service. Cooling fins dissipate heat and prevent the carrier from seizing on the pilot. Perfect alignment of stones assure absolutely concentric seats.

BLUE-POINT STONES
extra body for longer life

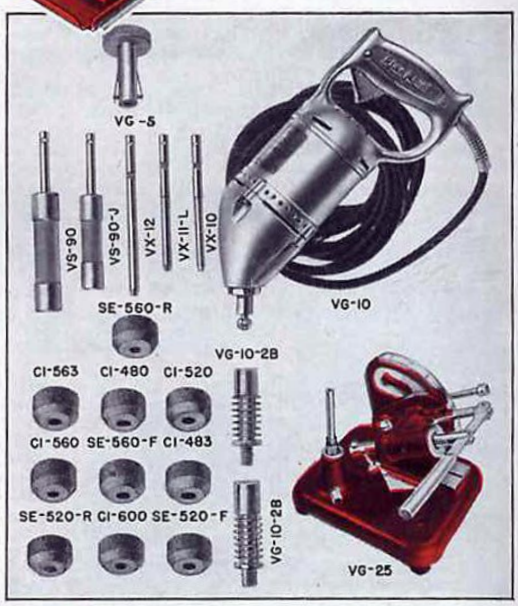
A complete range of stones of special grit and grade is available . . . *one-third thicker than ordinary stones,* they give almost double the length of service. The threaded bushing extends only part way through the stone and does not interfere with dressing operations before the stone is fully used up.

BLUE-POINT STONE DRESSER
simple to use and accurate

Universal swivel head will dress *all angles from zero to 90°* . . . the close-fitting plunger sleeve is protected from emery dust by leather packing at each end. 7½" x 7⅛" base is mounted on rubber feet—may be used on bench or in vise.

VG-100-B BLUE-POINT VALVE SEAT GRINDER SET

Complete as illustrated in special VG-100-A Metal Chest . . . drawers fitted with "no-spill" slide-runs . . . plenty of room for additional stones, pilots, and other related tools. Complete ....

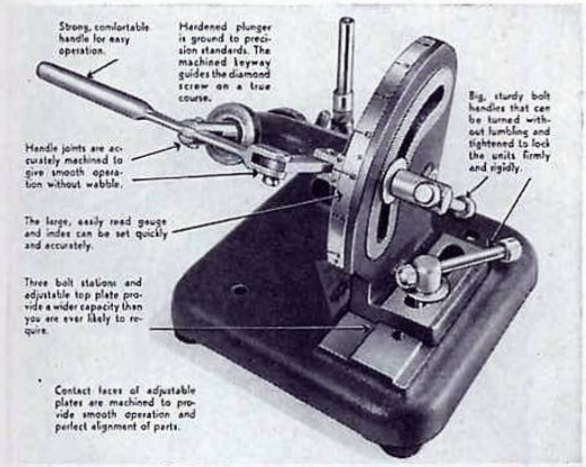


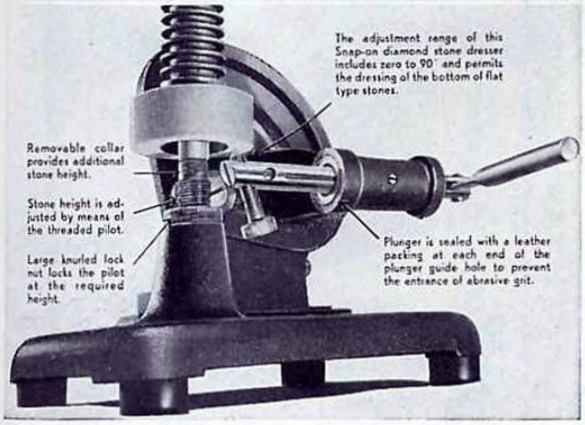
Contents of VG-100-B Set

VG-10—High Speed Angle Drive.....
★VG-10-2B—Stone Carrier (2 included) (Each)
★VG-25—Dressing Stand with Diamond.....
★VX-10—5/16" Pilot.....
★VX-11-L—11/32" Pilot.....
★VX-12—⅜" Pilot.....
★VS-90—Ford "V8-85" Pilot.....
★VS-90-J—Ford "V8-60" Pilot.....
★VG-5—Pilot Wrench .....
★SE-560-R—1¾" x 45° Stone (For Hard Seats).
★SE-520-R—1⅝" x 45° Stone (For Hard Seats).
★CI-480—1½" x 45° Stone (For Cast Iron).....
★CI-520—1⅝" x 45° Stone (For Cast Iron).....
★CI-560—1¾" x 45° Stone (For Cast Iron).....
★CI-600—1⅞" x 45° Stone (For Cast Iron).....
★CI-483—1½" x 30° Stone (For Cast Iron).....
★CI-563—1¾" x 30° Stone (For Cast Iron).....
★SE-560-F—1¾" x 45° Stone (For Finishing)..
★SE-520-F—1⅝" x 45° Stone (For Finishing)..
★VG-100-A—Metal Cabinet .....

A TRULY UNIVERSAL DIAMOND STONE DRESSER

- *Dresses all types of Valve Seat Stones*
- *Dresses all sizes of Valve Seat Stones*
- *Dresses to all Valve Seat Angles . . . .*
- *Dresses the Side, Angle and Bottom . . .*





Every adjustment required to dress any valve seat grinding stone now in use or likely to be used is built into this Snap-on Stone Dressing Stand. The sliding plate provides a travel capacity far greater than the diameter of the largest valve seat stones. Diamond Screw itself affords over a half inch of adjustment to stone diameter and for regulating the cutting feed. Pilot is adjustable for stone height and can be locked at any point. Larger and heavier than any similar dressing stand, its weight and size plus the absorbing action of four rubber feet holds vibration to a minimum . . . stand can be used on any convenient bench or be bolted in a permanent location.

Completely Universal

Many diamond dressing stands will only dress the stone angle; some will dress the angle and the side. The Snap-on VG-25 diamond stone dresser is so universally adjustable in use that it will dress the side, angle, and bottom of any valve seat stone. This is an extremely important feature because a number of heavy duty trucks have flat type valve sets.

Large Angle Setting Gauge

The large angle setting gauge is fastened to the top of the sliding plate, and the reading from zero to ninety degrees occupies a gauge length of 5¼". Markings for 0, 15°, 30°, 45°, 60°, 75°, and 90°, are large and easy to read and can be lined up with the index plate quickly and accurately. Spring tension built into the index plate aids in setting it to the required angle.

Heavy, Rugged Construction

The Snap-on VG-25 is larger and heavier than the usual dressing stand . . . an example of rugged precision throughout. The base casting is heavily ribbed to prevent distortion and retain original factory alignment. Both the slide plate and the index plate are heavy, rugged castings providing absolute rigidity in use, an important requirement in any dressing stand.

Plunger Sealed Against Grit

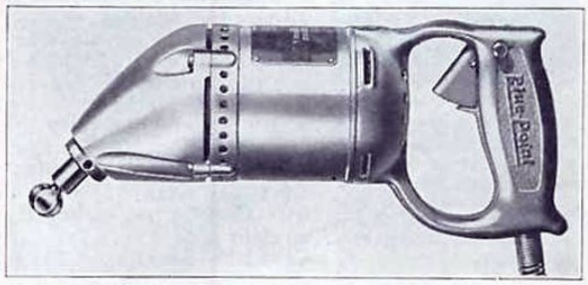
The diamond screw plunger is sealed at both ends of the plunger housing to prevent abrasive material from entering and causing excess wear of plunger or guide. The plunger is hardened and ground to precise tolerances and is machined with a keyway for positive guide of the diamond screw. Diamond screw tension can be adjusted for accurate setting and adjustment for cutting feed.

VG-25 —DIAMOND STONE DRESSER, Complete.....
VG-25-6—REPLACEMENT DIAMOND SCREW, Each.....

Heavy Duty Angle Drive Motors

These heavy duty motors are exceptionally powerful tools built to maintain the constant speed necessary for good work on hard seats. They are light in weight, and the built-in angle drive works around obstructions. Grease-sealed permanently lubricated ball-bearing construction on armature shaft and drive spindle. (Gear housing must be lubricated occasionally.) D. C. or A. C. up to 60 cycles (other voltages available on special order).

VG-12—HEAVY DUTY MOTOR for all sizes of stones. Each.....
VG-10—MOTOR for stones up to 2⅝" diameter. Each.....



BLUE-POINT STONES AND PILOTS





Sizes and Types of Stones Available

Stone Size	Stone Thickness	Price	For Cast Iron and Soft Steel 45°	For Cast Iron and Soft Steel 30°	For Hard Steel and Stellite 45°	For Hard Steel and Stellite 30°	For Finish Grinding 45°	For Finish Grinding 30°
1¼"	1"		★CI-400	★CI-403	★SE-400-R	★SE-403-R	★SE-400-F	★SE-403-F
1⅜"	1"		★CI-440	★CI-443	★SE-440-R	★SE-443-R	★SE-440-F	★SE-443-F
1½"	1"		★CI-480	★CI-483	★SE-480-R	★SE-483-R	★SE-480-F	★SE-483-F
1⅝"	1"		★CI-520	★CI-523	★SE-520-R	★SE-523-R	★SE-520-F	★SE-523-F
1¾"	1"		★CI-560	★CI-563	★SE-560-R	★SE-563-R	★SE-560-F	★SE-563-F
1⅞"	1"		★CI-600	★CI-603	★SE-600-R	★SE-603-R	★SE-600-F	★SE-603-F
2"	1"		★CI-640	★CI-643	★SE-640-R	★SE-643-R	★SE-640-F	★SE-643-F
2⅛"	1"		★CI-680	★CI-683	★SE-680-R	★SE-683-R	★SE-680-F	★SE-683-F
2¼"	¾"		★CI-720	★CI-723	★SE-720-R	★SE-723-R	★SE-720-F	★SE-723-F
2⅜"	¾"		★CI-760	★CI-763	★SE-760-R	★SE-763-R	★SE-760-F	★SE-763-F
2½"	¾"		★CI-800	★CI-803	★SE-800-R	★SE-803-R	★SE-800-F	★SE-803-F
2⅝"	¾"		★CI-840	★CI-843	★SE-840-R	★SE-843-R	★SE-840-F	★SE-843-F
2¾"	¾"		★CI-880	★CI-883	★SE-880-R	★SE-883-R	★SE-880-F	★SE-883-F
2⅞"	¾"		★CI-920	★CI-923	★SE-920-R	★SE-923-R	★SE-920-F	★SE-923-F
3"	¾"		★CI-960	★CI-963	★SE-960-R	★SE-963-R	★SE-960-F	★SE-963-F
3⅛"	¾"		★CI-1000		★SE-1000-R		★SE-1000-F	

THE Blue-Point grinder set includes roughing (white stones) and finishing (fine dark stones) for hard steel inserts and Stellite seats, as well as combination (coarse dark stones) for cast iron seats. When mounting stones on carrier, they should be dressed to 90° on the side as well as having the angle trued up.

Blue-Point Pilots are a contracting type . . . each segment compensating for wear in its own section of the guide hole to reestablish the correct center line. Clean valve guide hole before inserting pilot.

Blue-Point Pilots

Number	Size	Length	Each
★VX-10	5/16"	5 1/16"	
★VX-11	11/32"	5 1/2"	
★VX-11-L	11/32"	6"	
★VX-12	3/8"	6 1/16"	
★VX-12-S	3/8"	4 3/4"	
★VX-14	7/16"	6 13/16"	
★VX-14-L	7/16"	8 3/4"	
★VX-16	1/2"	6 13/16"	
★VX-16-L	1/2"	8 1/4"	
★VX-18	9/16"	6 13/16"	
★VX-19	19/32"	6 13/16"	
★VS-90	"V8-85"	6 13/16"	
★VS-90-J	"V8-60"	6 13/16"	

For Twenty-five Years the Standard of Highest Quality

BLUE-POINT VALVE COMPRESSORS

SERVICE the late model cars . . . **without removing the manifold!** Here's the tool that makes it possible—with the manifold removed it is the handiest and fastest valve spring compressor on the market. The handle is set high on the "C" frame to avoid the high fenders on late car models. Every part is built to give long, lasting satisfaction, and the tool has sturdy rigidity that makes for easy, safe work on the stiffest valve springs.

This Tool Has Many Important Features

1. Handle is placed out of way of hood and tie rods. Downward push with 8 to 1 leverage.
2. Note the loose ring attachment on bottom of frame—this ring can be slid to hold the tool locked in any required position.
3. Adjustment for valve stem length is easily secured. End of adjustable rod is fitted with a bellied footpiece with spring operating self-adjusting centering point to obtain a firm grip upon all types of valve head surfaces. Plunger stem is threaded for easy and fast adjustment.
4. The slim, strong adjustable jaws give most room to remove or replace the valve keys.
5. "C" frame, 11½" inside depth, 8¼" inside width, with 10½" opening capacity with offset jaws, 11½" capacity with straight jaws, allows enough clearance to operate without removing manifolds, especially on motors having down draft carburetor.
6. Lift starts off center which easily breaks loose tight washers.
7. Lift is from lower arm which gives direct lifting power.

CF-11-A—VALVE SPRING COMPRESSOR—Complete with CF-22-P set of offset jaws and CF-21-P set of straight jaws.....

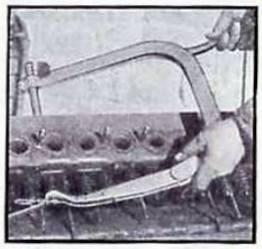


CF-11-A



CF-21-P Straight Jaws

Large "U" Type Valve Lifter



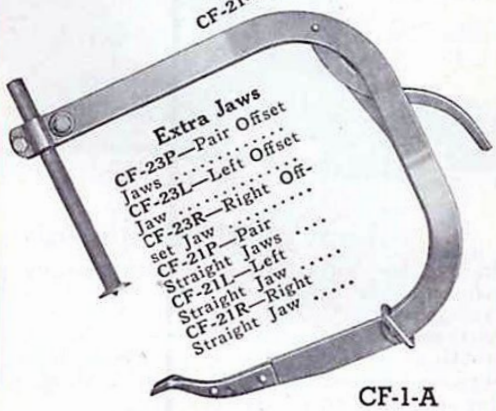
The CF-11-A and CF-1-A Valve Spring Compressor work well on overhead valves as illustrated above. Because of this fact, they have become two of the most practical lifters available today.

Universal in its scope—this valve spring compressor will take more different cars than any other compressor on the market. It is fast and easy to use, with the handle in the most convenient place for working and a downward lever action that compresses the tightest springs with ease . . . very light in weight and simple in operation. New type, stronger, slim, channel-formed, adjustable jaws for all sizes of springs.

The handle is on the side, out of the way of tie rods, hood, etc., and locks at any position by the use of the sliding ring on the lower part of the frame. "C" frame 11¼" inside depth, 11¾" inside width, opening capacity with offset jaws 10", with straight jaws 11". Plunger stem is threaded for easy and fast adjustment.

CF-1-A—VALVE SPRING COMPRESSOR. Complete with CF-22-P set of offset jaws and CF-21-P set of straight jaws .....

CF-23-P—Set of extra heavy offset jaws.....



CF-1-A

Little Wonder Valve Tool

This is one of the finest valve spring compressors ever designed . . . strongly constructed . . . easy to operate . . . positive pinion and rack action . . . automatic locking device . . . plunger shaft locks at any desired position. Ask any mechanic who owns one of these tools and he'll tell you that it's one of the handiest pieces of equipment that money can buy. Top part of the tool is designed for compressing springs for replacement in motor. Frame is 11⅛" deep, 9" wide, 10½" opening capacity.

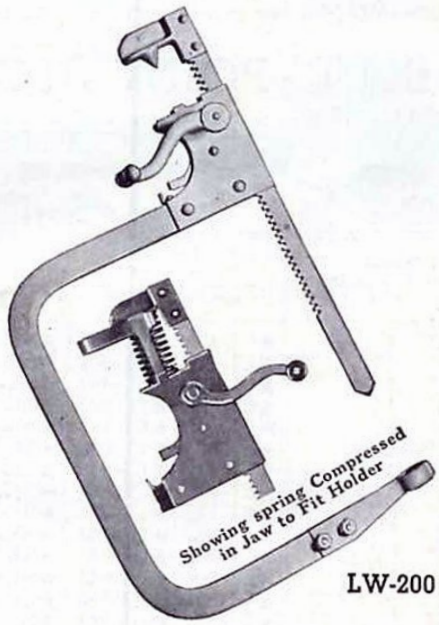
Practical Advantages of the Little Wonder

1. Adaptability to practically all cars and trucks.
2. Positive vertical lift. Jaws cannot slip off spring.
3. Positive automatic lock—locks to any desired point.
4. Handle fitted with ratcheting device to clear obstruction.
5. Jaws exceptionally thin. When it is impossible to get under spring, jaws will fit into any coil so that springs can be compressed and valve pin removed.
6. Compressing feature when you are ready to put spring back in motor.
7. Lifter large enough to clear exhaust manifold so that you can get to all springs without having to remove manifold, etc.

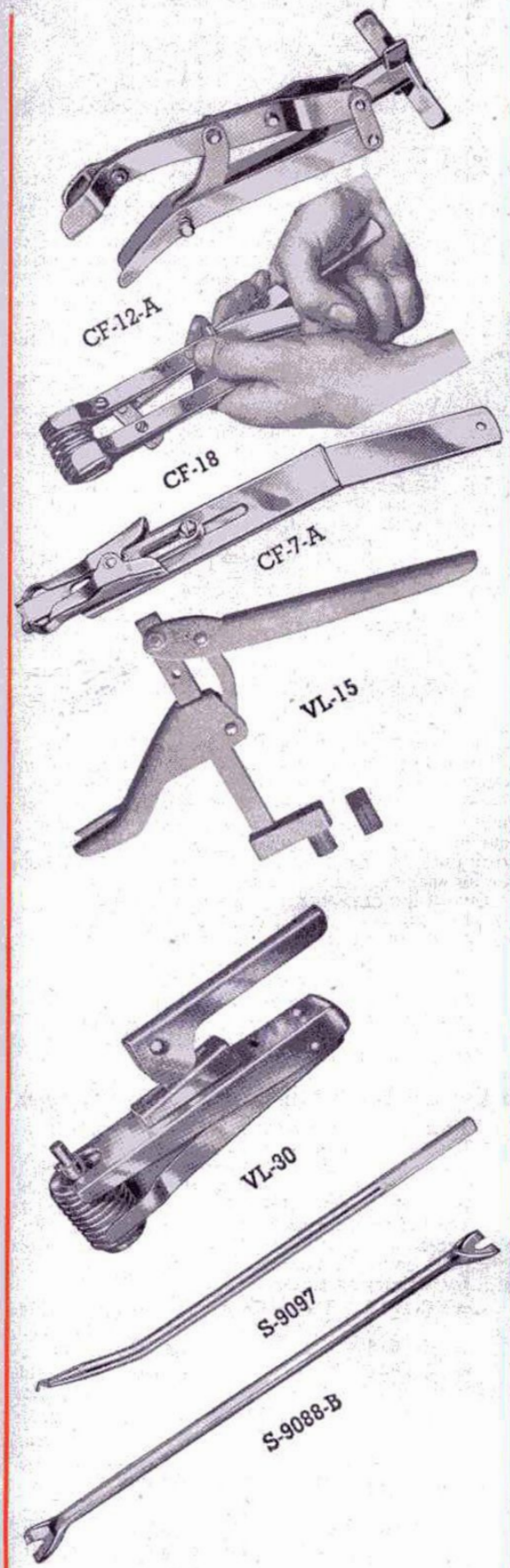


These illustrations show the bottom and side views of the spring holders . . . 3 sizes of which are included with each Little Wonder tool.

LW-200—LITTLE WONDER, complete with Straight Jaws and three Spring Holders.....
LW-630-P—Straight Jaws. Pair.....
LW-640-P—Offset Jaws. Pair.....
LW-660-P—Lincoln Jaws. Pair.....
LW-670-P—Jaws for Cadillac, Plymouth, Dodge, Chrysler and Waukesha Motors. Pair.....
LW-4—Set of 3 extra Spring Holders.....
LW-5—Blank Spring Holders. Each.....



LW-200



CF-12-A HAND VALVE LIFTER

"The little Shorty with the Big Lift" . . . now redesigned to give greater clearance under the manifold and over the fuel pump. *Short and compact*—only 8½" long, it will get into those tight spots and do jobs that have other lifters licked before they start. Jaws are adjustable for various spring sizes and have a lifting capacity of 2⅜" . . . they remain parallel at all times and lift the spring without binding or slipping to a height which allows ample room for access to the valve stem keys. When used on Pontiac or other engines having valve spring guides, the guides must be turned to clear the jaws of the lifter. Springs up to 300 pounds coil strength, twice the strength of any spring in common use can be lifted with this sturdy tool.

CF-12-A HAND VALVE LIFTER. Each.....

CF-18 Valve Spring Compressor

It's easy to compress valve springs when you use this tool for the job . . . jaws are adjustable for practically all diameter valve springs from model-A Ford to Dodge and Studebaker, and the handle link is made with two positioning holes for adjusting the tool for complete compression of different length springs. Only 9½" long, it compresses the stiffest springs easily and quickly and is most useful for replacing and removing springs in late model cars having fenders in close to the motor. A sliding ring lock holds the tool compressed at any preferred position. It is a much safer and faster way to compress these springs than by using a spring clip.

CF-18—VALVE SPRING COMPRESSOR. Each.....

CF-7-A Valve Key Replacer

You've always wanted the ideal Valve Key Replacer, and here it is . . . the narrowest, most compact tool for replacing all split type valve keys . . . works swell on hard-to-handle motors—Oldsmobile, Studebaker, Chrysler, DeSoto, Plymouth, Dodge, and other late model cars. It requires less working room than any other tool that we know about. The sliding base, now fitted with a pull tab for convenient use, prevents the keys from dropping into the motor while being replaced . . . *Easy to load . . . Easy to use*—you'll find yourself doing the job in less time than you ever thought was possible.

CF-7-A—VALVE KEY REPLACER. Each.....

Buick-Chevy Valve Spring Compressor

Fast . . . easy to use . . . this clever little tool is adaptable to all Buick, Chevrolet, and many other automobile engines with overhead type valves. It is a speedy and mighty efficient lifter to use and compresses these springs with an easy, one-hand movement. It will make you money, because it does the job quicker and easier than any other lifter now in use. The swinging foot rests on the block with one of the interchangeable studs in the bolt hole . . . two different studs are furnished to fit Buick and Chevy cylinder stud holes. There are three handle adjustment holes on the fulcrum post . . . the jaws always ride parallel to the motor block.

VL-15—VALVE SPRING COMPRESSOR. Each.....

Overhead Valve Spring Compressor

Designed for fast, efficient operation on Chevrolet and other cars having overhead valve engines with springs up to 1⅜" in diameter and 2¼" in length.

The single-action lever compresses the spring and locks securely—all in one motion—and leaves both hands free to remove or replace the valve keys. It eliminates prying on the cylinder head and is safer to use; as it is not positioned on a stud, it cannot break the boss around the stud hole.

A sliding wedge under the handle adjusts to three positions to vary the jaw capacity. Cold rolled channel steel construction makes it a sturdy tool, good for years of service.

VL-30—OVERHEAD VALVE SPRING COMPRESSOR. Each.....

Ford Valve Key Puller

You'll find Ford valve keys easy to pull with this special tool . . . it's designed to reach in, hook onto the key, and yank it out in a hurry. The hook is a separate piece of tempered steel riveted in place and can be replaced if broken . . . and while the tool is not guaranteed, it should last indefinitely if used only for this job.

★S-9097—FORD VALVE KEY PULLER. Each.....

★S-9097-2X—Extra hook and rivets. Per set.....

Ford Double End Valve Lifter

Designed to service Ford Valves on both the 85 and 60 series. Two tools in one at lower cost. Ample strength is provided through the use of the finest steel and the heads reinforced by side ribs.

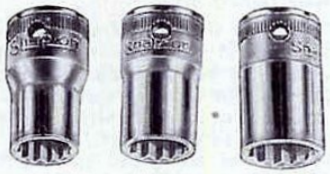
S-9088-B—FORD VALVE LIFTER.....

Makes Accurate Adjustments Easy While Motor is Running!



VALVE CLEARANCE ADJ. TOOL

Makes Accurate Adjustments Easy While Motor is Hot and Running



SW-160 ½" | SW-180 9/16" | SW-200 5/8"

DO rocker-arm tappet adjusting jobs on all valve-in-head motors the fast, easy Snap-on way . . . *save one-third the time other methods require.* No other wrenches are necessary—the only other tool needed being the proper size feeler blade.

This tool is now designed to accommodate standard Snap-on sockets and will take any size "SW" type (page 14) up to ¾".

It's the handiest tool ever devised for the job . . . saves juggling two or three wrenches and a feeler gauge . . . prevents danger of burning your hands on a hot motor . . . gives you a method of making perfectly accurate adjustments. The Screw Driver Blade is made of tempered alloy steel to give long, satisfactory service.

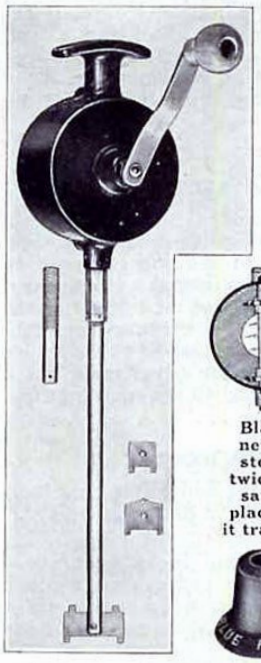
Easy to Use . . . The correct size socket is snapped onto the square drive of the tool and with the motor running at idling speed, it is inserted over the lock nut. The knob handle is turned with the left hand till the Screw Driver Blade slips into the screw slot. With the right hand the feeler gauge blade is inserted between the valve stem and rocker arm. The knob handle is next turned till a slight drag is felt on the feeler blade . . . Leave feeler in place while the screw is locked by turning the tool and socket with the right hand.

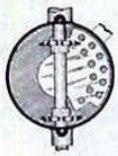
V-21-S VALVE CLEARANCE SET. Contains V-21-B Adj. Tool and 3 sockets listed below.

V-21-B Valve Adjusting Tool with 2⅝" Diameter Knob. Each .....
SW-160 ½" Socket. Each.....
SW-180 9/16" Socket. Each.....
SW-200 ⅝" Socket. Each.....
V-21-A Valve Adjusting Tool with 1⅝" Diameter Knob. Required for certain Buick models or other cars where fire wall comes up over the motor and leaves very little working space. Each.....

★Screw Driver tips are not guaranteed.

Blue-Point Valve Grinder





Blade never stops twice in same place—it travels

The sturdiest and smoothest operating tool of its kind. Pinion gears milled from solid bars of high carbon alloy tool steel, carefully heat treated and hardened. Large gear stamped from ⅛" steel properly hardened to withstand wear. Shaft made from cold rolled steel—ball-bearing thrust.

The blade turns forward and backward in rapid oscillating motion and advances 1/6 revolution for each single revolution of the crank. A real tool that will stand up in shop use and last indefinitely.

VG-2—VALVE GRINDER. With two stems, one long, one short. Each.....

Ford Suction Cup



Holds the valve properly for final grinding-in process. Fits shaft of Blue-Point Valve Grinder. Made of the very highest grade rubber.

S-9051—FORD VALVE SUCTION CUP. Each.....

Valve Guide Hole Cleaners (Power Type)



When you've cleaned out a valve guide hole with one of these tools, *you know it's really clean* . . . no gum—no carbon—no scale is left. They are built to work in an electric drill (preferably ¼"). The blades, being square spring stock, are extremely rigid and give a very fine cutting action . . . correct tension for various sizes of guides is regulated by the adjusting nut. The smallest size fits most cars, the popular sizes being 5/16", 11/32", and ⅜".

★BC-10—VALVE GUIDE CLEANER, 5/16" to ½" capacity. Each.....
★BC-10-5 Set of five blades for BC-10.....
★BC-14—VALVE GUIDE CLEANER, 7/16" to ⅝" capacity. Each.....
★BC-14-7 Set of seven blades for BC-14.....

Special Ford Sizes

★BC-25—25/32" VALVE GUIDE CLEANER for V8-60 Ford. Each....
★BC-25-11 Set of 11 blades for BC-25.....
★BC-31—31/32" VALVE GUIDE CLEANER for V8-85 Ford.....
★BC-31-13 Set of 13 blades for BC-31.....

Valve Guide Hole Cleaners (Hand Type)



This set of three Valve Guide Cleaners will handle all popular cars including Fords. The tempered spring steel expansion type blades can be reversed to present a new cutting edge, and can be resharpened by holding the flat edge against an emery wheel. Designed primarily for hand operation, but can be used in an electric drill. Many industrial concerns use these tools for deburring holes.

★VC-1018 Valve Guide Cleaner (fits guides 5/16" to 9/16") Each.....
★VC-1018-4 Set of blades for VC-1018.....
★VC-1824 Valve Guide Cleaner (fits guides 9/16" to ¾") Each.....
★VC-1824-5 Set of blades for VC-1824.....
★VC-2733 Valve Guide Cleaner (fits guides 27/32" to 1 1/32") Each.....
★VC-2733-5 Set of blades for VC-2733.....

Valve Guide Hole Brushes



Well made brushes of spiral design. Highest quality wire brushes securely woven into the twisted wire handle. Fluted wood handle provides a good firm hand grip.

No.	Size	Each	No.	Size	Each
★AC-10	5/16"		★AC-18	19/32"	
★AC-11	11/32"		★AC-19	1 1/32"	
★AC-12	⅜"				

CS-1 Blue-Point Carbon Scraper

A flexible wire carbon scraper designed to do a quick, easy job and to give long and useful service. Blades made of highest quality oil tempered spring steel with flexibility controlled by a sliding ferrule.

★CS-1—FLEXIBLE WIRE CARBON SCRAPER. Each.....



CS-1 Carbon Scraper

FRONT WHEEL ALIGNMENT IS EASY — WITH THIS NEW Snap-on EQUIPMENT!



- ANY MECHANIC CAN USE IT.
- IT DOES NOT REQUIRE PERMANENT FLOOR SPACE OR TURN TABLES
- IT ACCURATELY CHECKS—
  1. Wheel Camber
  2. Wheel Caster
  3. Steering Geometry or Toe-Out
  4. Front Wheel Toe-In
- IT WILL WORK ON ANY MOTOR VEHICLE—CARS—TRUCKS—BUSSES

COMPLETE EQUIPMENT INCLUDES:

- Set of TWO Camber and Caster Protractors
- Toe-in Trammel Bar with Travelling Gauge
- Angle Gauge for setting front wheels at correct checking angles



HERE is a simplified method of checking front wheel alignment . . . a method that removes the mystery and reduces it to a few easy-to-understand, fast-checking operations. You don't need massive, expensive, space-stealing equipment to check front wheels accurately. *Your shop . . . every shop . . . can do an expert-like job* on any car, truck, or bus with this Snap-on equipment.

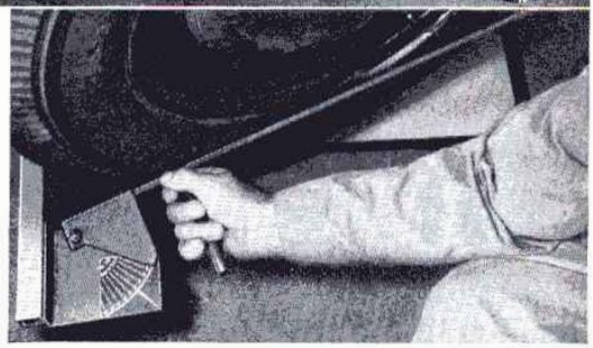
A national survey shows that about one in every four motor vehicles in use is in need of some form of adjustment corrections—almost eight million front wheel aligning jobs will be done in this country this year.

Are you getting your share of these wheel aligning profits? . . . Or has lack of floor space or the cost of larger types of wheel aligning equipment made you pass along this profitable work to other shops?

Every shop can afford this Snap-on equipment, and **every** shop has available floor space to use it. No turntables and no permanent installation of any kind are required . . . the equipment can be used on any **level floor**, and any mechanic can understand and use it. With it you can accurately check Camber, Caster, Steering Geometry, and Toe-in—and do it fast . . . a matter of minutes on most jobs.

One important feature is the matched pair of camber and caster protractors . . . there's no time wasted interchanging one protractor on both front wheels. Protractors are quickly fastened to the wheels by means of special lug clamps and are easily read as shown above and below. Ball-bearings in the pendulums insure a free swinging action.

The Toe-in Trammel Bar has check bars which rest against the tire wall . . . no chalk markings are needed. The sliding adjustable gauge adapts the tool to different width treads. The Angle Gauge shown at the right has clearly marked plates on both sides that can be easily seen and read.



WA-504—SNAP-ON WHEEL ALIGNING SET consisting of three units and metal case.

- WA-50—Set of Two Camber and Caster Protractors.
- WA-51—Toe-in Trammel Bar and Gauge.
- WA-52—Angle Gauge.
- WA-54—Metal Case. Holds Protractors and Gauge.

WA-53—Special Clamps for use on convex disc type truck wheels. Not included in WA-500 Set. Two needed.

ASK TO SEE SNAP-ON'S SLIDE FILM ON FRONT WHEEL ALIGNMENT

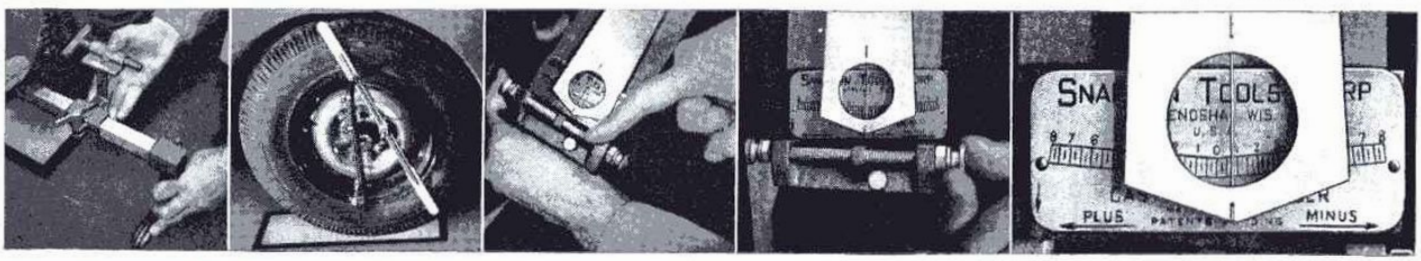
Traveling gauge used to obtain front and rear measurements of front wheels for toe-in check.

Protractors are fastened to wheels as shown . . . bar is angled to miss tire bulge at road level.

This front knurled screw centers the scale plate for properly checking the camber angle readings.

When checking caster, scale plates are first positioned accurately by these side knurled screws.

Plus and minus signs are used for checking caster. Positive or negative camber is shown by whether the hairline is between zero mark and wheel or outside zero mark.



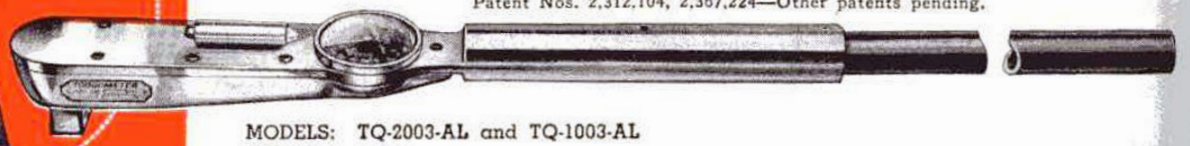
For Twenty-five Years the Standard of Highest Quality

WHERE ACCURATE BOLT TENSION IS REQUIRED

Snap-on TORQOMETERS

MAKE PRECISION TENSIONING EASY AS READING A WATCH

Patent Nos. 2,312,104, 2,367,224—Other patents pending.



MODELS: TQ-2003-AL and TQ-1003-AL



MODELS: TQ-602-A and TQ-352-A

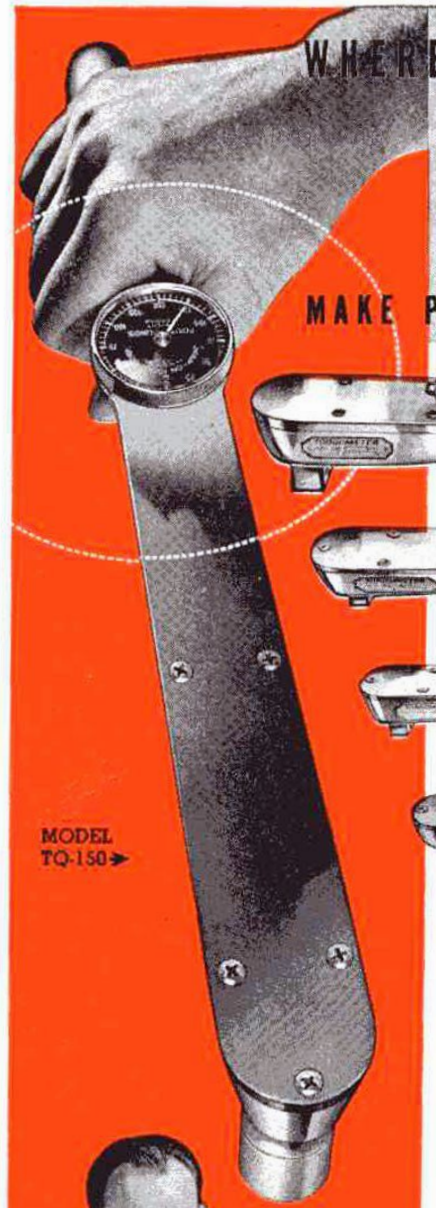


. . . AVAILABLE IN 15 MODELS . . . . FROM ZERO TO 30 INCH LB. AND UP TO 2000 FOOT LB. TORQUE CAPACITY.

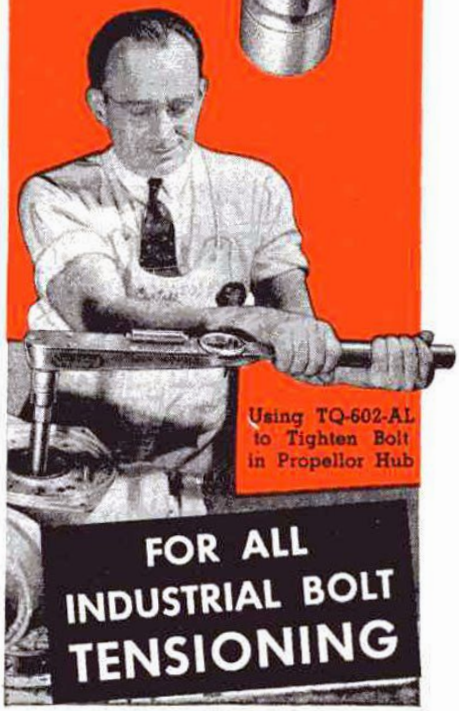
MODEL: TQ-250



MODELS: TQ-150, TQ-51-A, TQ-50-A, TQ-12-A and TQ-3



MODEL TQ-150 ➔



Using TQ-602-AL to Tighten Bolt in Propellor Hub

FOR ALL INDUSTRIAL BOLT TENSIONING

EVEN veteran mechanics cannot be expected to *guess* correct bolt tension . . . or estimate even close to uniform accuracy where a series of bolts must be tightened. But with a Snap-on *TORQOMETER* the most inexperienced worker can hit the specified bolt torque every time . . . *right to the correct inch or foot pound* . . . and do it swiftly and confidently. He *sees* the applied torque as the bolt is tightened . . . as easy as reading a watch.

Flashlite Torqometers

These models are fitted with a device which lights a small flash bulb the instant the required bolt tension is reached. Uses standard bulbs and batteries.

IMPORTANT TORQOMETER FEATURES

1. Lightweight, well balanced, streamlined design for ease of operation.
2. Friction-free operation with free-floating dial pointer actuating rod—no bearing points to cause friction or wear.
3. Amplified torque measurement; torque applied to the drive head is amplified about 470 times on the dial—making extremely accurate readings possible.
4. Pointer and scale of shock-proof dial mechanism can be preset to any desired position for easy reading and required tension.
5. Pointer actuating rod is not affected by handle leverage, grip position or other working conditions. Dial readings are *accurate* at all times.
6. Torqometers can be used to tension right or left hand threaded bolts—dial pointer works both ways from zero position.
7. Built to withstand an overload beyond the dial recording capacity of each model—a slip clutch protects the pointer mechanism.
8. Complete range of Torqometer capacities for all tensioning operations—from 0 to 30 inch pounds up to 0 to 2,000 foot pounds.

TQ-2003-TL Tee Handle Heavy Duty Torqometer



A new 2,000 foot-pound model offering adaptability, power, and accuracy for all big bolt tensioning operations such as diesel engine maintenance, etc., where working space is limited. Equipped with flash signal and 4" diameter adjustable dial . . . weight: 30 pounds . . . finish: gun metal . . . used with 1" square drive sockets.

Patent No. 2,374,217

Can be used either as a tee handle tool as shown or with a single handle . . . whichever is most convenient. The two handles provided are quickly and safely locked to or removed from the unit.

Torqometer Types and Sizes

Standard Models		Flashlight Models		Square Drive	Torqometer Capacity	Depth	Width	Tool Length	Length with Handle
Model No.	Price	Model No.	Price						
TQ-3		.....		1/4"	30 In. Lbs.	1 1/8"	1 1/2"	9"	.....
TQ-12-A		TQ-12-AL		3/8"	150 In. Lbs.	1 3/16"	1 5/8"	13 1/4"	.....
TQ-50-A		TQ-50-AL		3/8"	600 In. Lbs.	1 3/16"	1 5/8"	13 1/4"	.....
TQ-51-A		.....		1/2"	600 In. Lbs.	1 3/16"	1 5/8"	13 1/4"	.....
TQ-150		TQ-150-L		1/2"	150 Ft. Lbs.	1 3/16"	1 3/4"	16 1/2"	.....
TQ-250		.....		1/2"	250 Ft. Lbs.	1 5/8"	2"	24"	.....
TQ-352-A		TQ-352-AL		3/4"	350 Ft. Lbs.	1 5/8"	2 1/4"	24"	32"
TQ-602-A		TQ-602-AL		3/4"	600 Ft. Lbs.	1 5/8"	2 1/4"	24"	42"
.....		TQ-1003-AL		1"	1000 Ft. Lbs.	2"	2 7/8"	25 1/4"	66 1/2"
.....		TQ-2003-TL		1"	2000 Ft. Lbs.	5 1/4"	4 1/4"	.....	64"

See Torqometer guarantee on page 1. See Ratchet Adaptors on pages 9 and 12.

POWER TO PULL THE TOUGHEST JOBS—EASILY

Snap-on

KING PIN AND PERCH PIN PULLER SETS

COMPLETE IN SPECIAL METAL CASE



The Snap-on King Pin Puller provides an easy way to remove the most stubborn King Pins and eliminates any need for heating or for using sledge hammer tactics. This tool does away with such time taking and dangerous methods . . . it works right on the job *without pulling the axle* and exerts a steady, powerful pressure that pushes the pin out safely, easily and quickly. It has plenty of power and strength to handle the toughest of these jobs. Perch hangers on Ford passenger cars and trucks can also be quickly removed with the four special parts included in the CG-220-A and the CG-215-A Sets.
To remove King Pins, the front wheel is removed and the two upright rods slipped over the axle and steering knuckle plate. The end pieces are shaped to fit various steering knuckles and are designed to swivel enough to adapt themselves to practically any car except those with knee action. Various pilots adapt the tool to the different sizes of King Pins used on Ford, Chevrolet, Plymouth, and other cars.
Snap-on's King Pin Puller has long been a popular tool and we believe it to be the most efficient tool yet developed for King Pin servicing.

King Pin Puller Sets

CG-220-A—MASTER KING PIN AND PERCH PIN SET—Complete set containing all parts illustrated and listed below except CG-21-Q and CG-21-R. Tools only.....

CG-220-A-B—Above set complete in Case.....

No. B-5-R—METAL CASE ONLY. Each.....

CG-210—GENERAL PURPOSE SET (Without Ford Attachments)—Includes: CG-21-A, CG-21-B, CG-21-E, CG-21-F, CG-21-D (Pair), CG-21-P-1, CG-21-P-2, CG-21-G, CG-21-J, (Pair). Tools only..

CG-210-B—Above Set Complete in Case.....

CG-225—STANDARD KING PIN SET—(Including Ford Parts)—Includes all units listed in the CG-210 Set plus: CG-21-C and CG-21-H. Tools only..

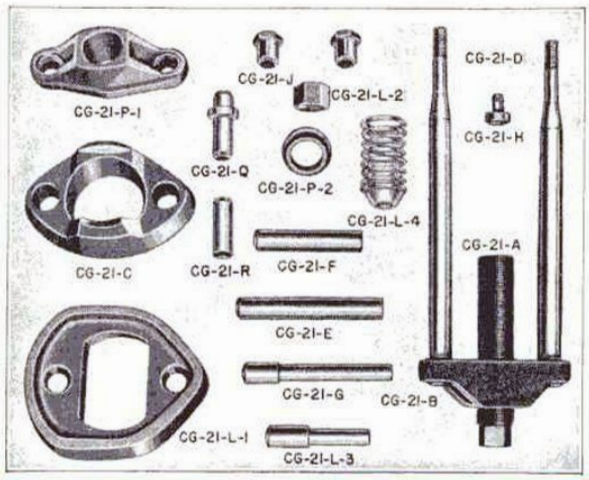
CG-225-B—Above Set Complete in Case.....

CG-215—FORD KING PIN SET—Includes: CG-21-A, CG-21-B, CG-21-C, CG-21-D (Pair), CG-21-E, CG-21-F, CG-21-H, CG-21-J (Pair). Tools only..

CG-215-B—Above Set Complete in Case.....

CG-215-A—FORD KING PIN AND PERCH PIN SET—Includes all units in the CG-215 Set plus: CG-21-L-1, CG-21-L-2, CG-21-L-3, CG-21-L-4. Tools only .....

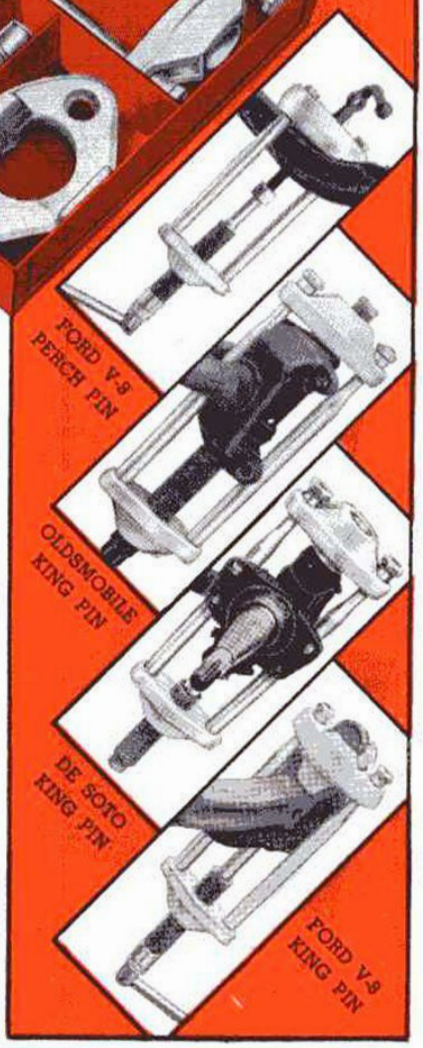
CG-215-A-B—Above Set complete in Case.....



Complete List of King Pin Puller Parts

*CG-21-A	Pressure Screw .....
*CG-21-B	Threaded End Piece.
*CG-21-C	Ford Head .....
*CG-21-D	Side Posts (pair)....
*CG-21-E	¾" Long Pilot.....
*CG-21-F	¾"Short Pilot .....
CG-21-G	⅝" Pilot .....
*CG-21-H	Pilot Bearing .....
*CG-21-J	Nuts (Upper) pair...
CG-21-L-1	Perch Head .....
CG-21-L-2	Perch Thrust Nut...
CG-21-L-3	Perch Pilot .....
CG-21-L-4	Perch Adaptor Guide for CG-21-L-3 .....
CG-21-P-1	General Use Head...
CG-21-P-2	Bushing .....
★CG-21-Q	11/16" Pilot for Ford 1½ ton Trucks.....
★CG-21-R	¾" Pilot Bearing for CG-21-Q .....

*Parts needed for Ford King Pins.



For Twenty-five Years the Standard of Highest Quality

Universal Steering Wheel Puller

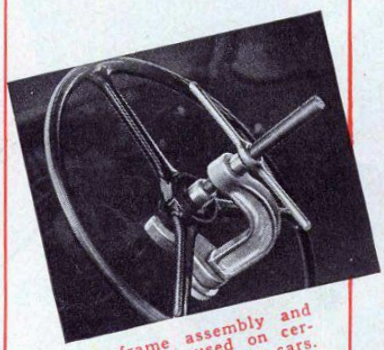
AN EASIER AND BETTER WAY TO DO THE JOB . . . HANDLES ALL CARS AND TRUCKS



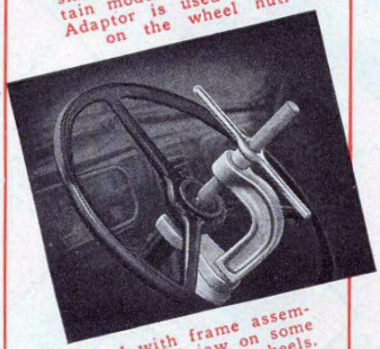
HERE'S something your shop needs! A puller that handles older models only is not of much value—a tool that pulls from the spoke when the wheel should be pulled from the hub is apt to damage the wheel . . . but, *one puller that will service everything that rolls into your shop* is something you can't afford to be without.

This one tool pulls all steering wheels safely and quickly . . . eliminates the need for several special pullers to fit different car models . . . does away with block and hammer methods . . . does the job quickly and with safety to other parts of the car. Interchangeable jaws and bushings quickly adapt it to any type of steering wheel hub and place *smooth, powerful pressure* at exactly the right place to assure fast workmanship and an efficient job. The narrow fork has a brass insert, and the wide fork is covered with rubber to protect the steering wheel column when in use. The pressure screw does **not** turn . . . it is milled its entire length and works through a threaded bushing and key—thereby eliminating any possibility of damage to the shaft. Pressure screw and forks are in positive alignment, and the forged "I" beam standard does not permit give or spring . . . this tool **must** pull in a straight line.

The 4-Arm Yoke Type Puller is intended to pull steering wheels of latest design, including slotted-type hubs, and is used with any one of the four sets of special studs.



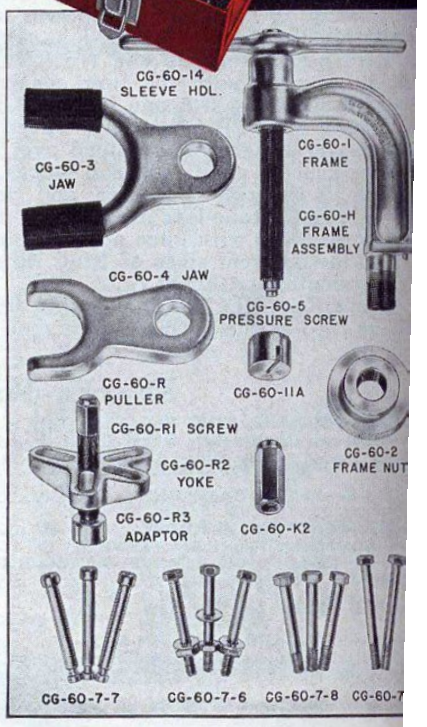
Large frame assembly and small jaw as used on certain models of Dodge cars. Adaptor is used and rests on the wheel nut.



As used with frame assembly and small jaw on some Chevrolet steering wheels. Pressure screw rests on the shaft inside the nut.



The wide fork and frame assembly as used on fairly recent model Fords. Late models require the small 3-way yoke puller shown opposite.



Steering Wheel Puller Sets

CG-60-FB—COMPLETE STEERING WHEEL PULLER SET, containing all parts included in the CG-60-D Set and the CG-60-E Set in B-6R Metal Box .....

CG-60-D SET for standard type hubs. Consists of the following parts. Tools only.....

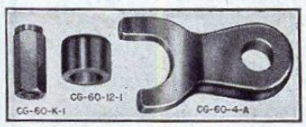
- CG-60-H—Frame Assembly .....
- CG-60-3—Wide Fork .....
- CG-60-4—Narrow Fork .....
- CG-60-11A—Slotted Adaptor .....
- ★CG-60-K-2—Chevrolet Shock Puller.....

CG-60-E SET for slotted type and other late design hubs. Consists of the following parts. Tools only .....

- ★CG-60-R1—Yoke Pressure Screw.....
- CG-60-R2—4-Arm Yoke .....
- CG-60-R3—Pressure Screw Adaptor.....
- ★CG-60-7-4—5/16" N.F. Studs with Nuts and Washers (2 Required). Each.....
- ★CG-60-7-6—5/16" N.C. Studs with Nuts and Washers (3 Required). Each.....
- ★CG-60-7-7—Buick Studs (3 Req.). Each....
- ★CG-60-7-8—3/8" N.C. Studs (3 Req.). Each.

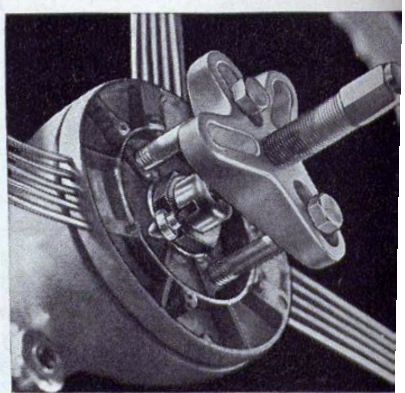
B-6R—Metal Box for above sets. Each.....

Optional Parts Available



These parts are not included in the above sets but are available as optional equipment.

CG-60-K-1—Shock Puller for early 1940 Fords and Mercury models .....
CG-60-4-A—Special Fork for Mercury.....
CG-60-12-1— Adaptor for use on large truck wheels



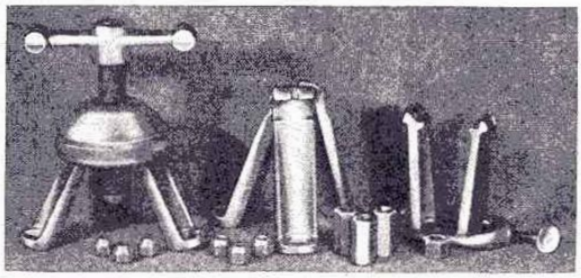
Showing the Yoke Assembly used to pull a model steering wheel . . . how contact is p out and the adaptor slot straddles the wire

UNIVERSAL WHEEL PULLER

Interchangeable Jaws Adapt it to all Demountable Wheel Hubs and all Ford Cars

JUST ONE Snap-on Universal Wheel Puller Set to buy . . . and it fits any demountable wheel hub in use on present-day cars and light trucks and can be quickly adapted to any of these wheels by inserting the proper type jaws and attaching the tool to the stud bolts. The patented pressure screw drive is known to be the fastest, easiest, safest, and most efficient method of pulling any hub . . . the interchangeable jaws pivot and swing to any desired bolt circle. Pulling is always direct from the housing flange, and the jaws *automatically center themselves,* providing a positive direct leverage regardless of the working angle of the jaws. No other universal wheel puller has this important self-aligning feature or such a fast, easy method of changing the jaws.

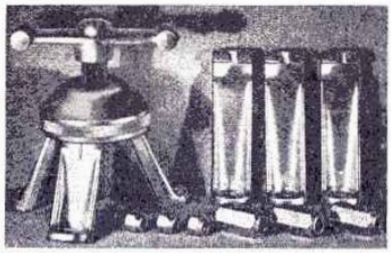
The relatively low cost of this equipment is no real measure of its full economy—it will stand up under the most severe working conditions . . . do every job efficiently—without waste of time and without danger to any part of the car or to the operator. Any puller that will not do this is expensive at any price . . . compare the advantages of the Blue-Point Universal Wheel Puller with any other type.



Y-4567 Complete Universal Wheel Puller Set



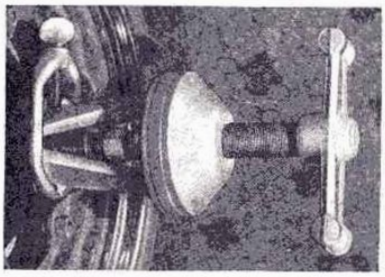
To interchange jaws, hold two together as shown. This depresses the inner sleeve and allows room to remove or insert a third jaw . . . *It only takes a jiffy.*



W-4567 Wheel Puller Set—Services practically all passenger cars and light trucks except 1936 Ford V-8 and Lincoln Zephyr.

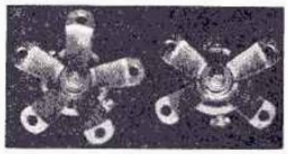


S-4567 Standard Wheel Puller. Services a majority of passenger cars except Ford and Lincoln Zephyr.



4567-V Special Attachment for Ford and Lincoln Zephyr. Consists of two jaws, clamp and thrust nut.





Use these thrust nuts and protect the axle.

Additional jaws can always be added if necessary.

Y-4567 Universal Wheel Puller Set

Y-4567—UNIVERSAL WHEEL PULLER SET. Will service all passenger cars and most light trucks with demountable type wheels. Contains all the following parts described below and illustrated at left . . . . . .

4567-P—Body and Drive Assembly—contains the following parts: 4567-A-BB-DD-EE-F.
4567-A—Screw and Handle. . . .
4567-BB—Body . . . . . .
4567-DD—Sleeve . . . . . .
4567-EE—Washer . . . . . .
4567-F—Spring . . . . . .
4567-G—Set of three short jaws.
4567-H—Set of three long jaws. .
4567-V—Ford passenger car grooved hub set . . . . . .
4567-C—Set of three 9/16" tapered stud nuts . . . . . .
4567-CC—Set of three 7/16" tapered stud nuts . . . . . .
4567-I—Set of three, right and left hand 3/4" stud nuts. . . . . .

W-4567 General Wheel Puller Set

W-4567—GENERAL WHEEL PULLER SET. Services practically all passenger cars and light trucks except 1936 Ford V-8 and Lincoln Zephyr . . . . . .

4567-P—Body and Drive Assembly. . . . . .
4567-G—Set of three short jaws. . . . . .
4567-H—Set of three long jaws. . . . . .
4567-C—Set of three 9/16" stud nuts. . . . . .
4567-I—Set of three right and left hand 3/4" stud nuts. . . . . .

S-4567 Standard Wheel Puller Set

S-4567—STANDARD WHEEL PULLER. This is the basic outfit . . . with it you can service a majority of passenger cars, except Ford, Mercury, and Lincoln-Zephyr. Other units can be added as you find the need for them. . . . . .

4567-P—Body and Drive Assembly. . . . . .
4567-G—Set of Three Short Jaws. . . . . .

4567-V Special Jaws for Ford Cars

Services all Ford passenger cars since 1928 model, also the Lincoln Zephyr and Mercury. Special Ford attachment consists of four parts—two jaws, clamp and thrust nut. Jaws are inserted in the 4567-P Body, placed around the grooved hub and locked on with the clamp. If you do not already own one of the above puller sets, you will require a 4567-P Body Assembly for use with this attachment. A few hammer blows on the drive handle removes the tightest hub . . . for trucks the 4567-H Set of 3 long jaws is required.

4567-V—FORD GROOVED HUB SET. . . . . .

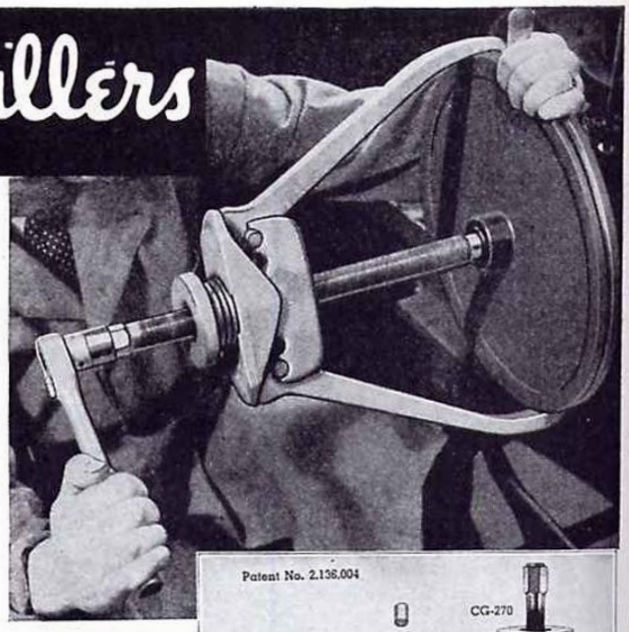
Use Thrust Nuts and Protect the Axles

Blue-Point Thrust Nuts should be used on small and medium sized axles in order to protect the threads while pulling the hub. It takes time to clean up or re-cut threads after they have been damaged. These nuts, machined from high quality steel and especially heat treated, will more than repay their small cost.

★TN-1300—SET OF 13 THRUST NUTS LISTED BELOW. . . . . .

★TN-201—5/8" x 18, 3/4" long. . . . .
★TN-202—5/8" x 18, 2" long. . . . . .
★TN-241—3/4" x 16, 3/4" long. . . . .
★TN-242—3/4" x 20, 2" long. . . . . .
★TN-243—3/4" x 16, 2" long. . . . . .
★TN-261—13/16" x 16, 3/4" long. . .
★TN-281—7/8" x 14, 3/4" long. . . . .
★TN-282—7/8" x 18, 3/4" long. . . . .
★TN-283—7/8" x 14, 2" long. . . . . .
★TN-321—1" x 14, 3/4" long. . . . .
★TN-322—1" x 14, 2" long. . . . . .
★TN-401—1 1/4" x 12, 7/8" long. . . .
★TN-402—1 1/4" x 12, 2 1/2" long. . .

Snap-on Gear Pullers



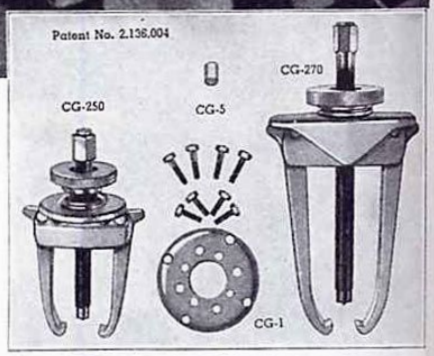
NOW OFFERED IN THREE POPULAR SIZES, WITH THE TWO SMALLER MODELS AVAILABLE IN EITHER STANDARD OR SLIDE HAMMER TYPE OR AS A COMBINATION OF BOTH.

The yoke and jaw construction is the same on both standard and Slide Hammer models . . . built on a principle that gives more locking power than any other puller of its size . . . pulls small gears as easily as big ones . . . produces safe, uniform power over the entire pulling range. A principle that gives you slip-less, tip-less pulling.

Jaws are reversible for either "inside" or "outside" holds and jaw tips are sturdily built and specially heat treated to provide ample strength for any job within the size capacity of the tool. The largest model has withstood over eighteen tons pull on test.

Pressure screws for CG-250 and CG-270 standard models have a ¾" hexhead and can be turned by any standard ¾" wrench. CG-300 requires a standard 1" wrench. The two smaller pullers are available in both standard pressure screw and slide hammer types . . . the large 12" capacity puller is made in the standard pressure screw type only. In addition to a wide range of gear sizes, these tools also pull Pitman Arms, tie-rod ends, universal joint splines, etc. A circular plate attachment also adapts the pullers to handle water pump and generator pulleys and to special gears.

The centralized, guided shock of the booster hammer, combined with the screw tension, provides a pulling force unequalled by any other methods . . . distributing the pull equally on all sides, it eliminates binding and does the job quickly and safely.



Above: **CG-300** puller used with ratchet and socket. Note the wide jaw capacity of this tool.

CG-250-H—SLIDE-HAMMER GEAR PULLER. 4½" Capacity. Each .....

CG-250—STANDARD GEAR PULLER. 4½" Capacity. Each .....

CG-270-H—SLIDE-HAMMER GEAR PULLER. 8½" Capacity. Each .....

CG-270—STANDARD GEAR PULLER. 8½" Capacity. Each .....

CG-300—STANDARD GEAR PULLER. 14" Capacity. Each .....

★CG-1—CIRCULAR PLATE ATTACHMENT. For water pump and generator pulleys, etc. Each.....

★CG-5—SCREW EXTENSION. 9/16" dia. Used to protect screw when used on shaft without a center hole. Each.....

Individual Part Numbers

Description	For CG-250-H and CG-250	For CG-270-H and CG-270	For CG-300
Hexhead Screw	CG-250-1 Each.....	CG-270-1 Each.....	CG-300-1 Each.....
Yoke	CG-250-2 Each.....	*CG-270-2 Each.....	CG-300-2 Each.....
Jaw (2 needed)	CG-250-3 Each.....	*CG-270-3 Each.....	CG-300-3 Each.....
Locking Plate	CG-250-5 Each.....	*CG-270-5 Each.....	CG-300-5 Each.....
Spring	CG-250-6 Each.....	*CG-270-6 Each.....	CG-300-6 Each.....
Adjusting Nut	CG-250-7 Each.....	*CG-270-7 Each.....	CG-300-7 Each.....
Slide Screw Bar	**CG-250-8 Each.....	**CG-270-8 Each.....	.....
Booster Hammer	**CG-250-9 Each.....	**CG-270-9 Each.....	.....
Cross Bar	**10-F Each.....	**10-F Each.....	.....

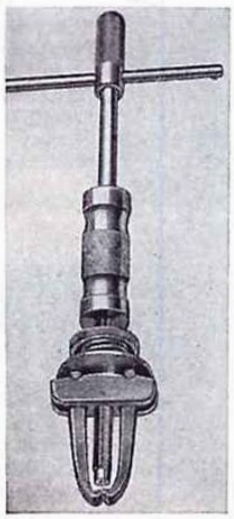
*These parts convert your CJ-66 Universal Puller (Page 69) to a General Purpose Puller.
**These parts convert your CG-250 or CG-270 Puller to a Slide Hammer type tool.

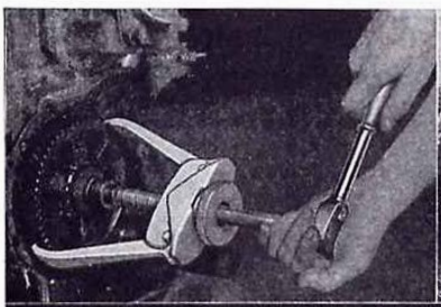


JAW CAPACITIES

CG-250 and CG-250-H	CG-270 and CG-270-H	CG-300
On Outside Holds Maximum Jaw Spread is 4½".	On Outside Holds Maximum Jaw Spread is 8½".	On Outside Holds Maximum Jaw Spread is 14"
On Inside Holds Jaws Operate Through Openings 1½" Diameter	On Inside Holds Jaws Operate Through Openings 2½" Diameter	On Inside Holds Jaws Operate Through Openings 3½" Diameter

Right: CG-270-H Slide Hammer Puller
Below: CG-250-H Slide Hammer Puller





Pulling Large Timing Gear with CG-270 Snap-on Gear Puller



CG-250 Snap-on Gear Puller Used to Remove Oil Return Wheel

SNAP-ON PINION GEAR PULLER

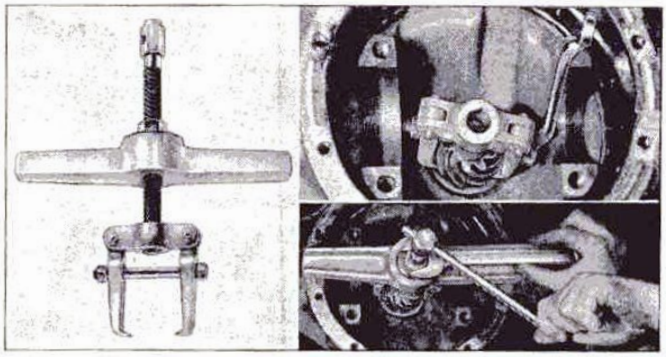
In this tool we have developed an efficient, easy-to-do-it way of pulling the tightest pinion gear without damage . . . it will handle General Motors cars on which it is possible to remove the pinion gear through the differential housing.

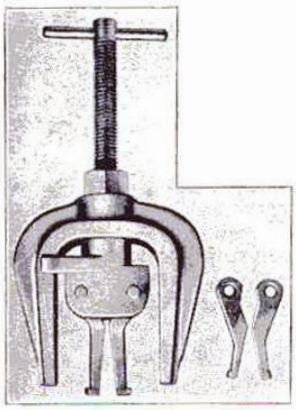
The illustrations show the procedure used—first the pressure screw is removed from the yoke assembly. The clamp bolt is then removed, the jaws placed over and behind the pinion gear teeth, and the clamp bolt replaced and tightened . . . this clamp action forces the jaws behind the gear and because of their wedge shape starts the pull.

The straddle bar is next placed across the banjo housing, the pressure screw inserted through it and into the yoke. Tightening the hexagon nut against the bar will then pull the gear. A ball thrust in the straddle bar takes the load, permitting the tightest gear to be easily removed.

A-86—PINION GEAR PULLER .....

★A-86-2—Jaws only. Each .....





Pilot Bearing Puller
For Clutch Pilot, Generator, and Other Small Bearings

This small puller is designed to work efficiently on clutch pilot bushings as well as bearings . . . while many other tools are available and work satisfactorily on one or two jobs, this tool is truly universal in its adaptability to all such small jobs on motors, generators, magnetos, etc.

It is a screw puller of the leg type, furnished with two sets of jaws—one for small bearings, the other for bronze and Oilite bushings . . . these latter jaws are so built that they will remove these bushings without crumbling them.

The smaller jaws are designed to handle bearings and will take the unusually small clutch pilot bearing found on Hudson-Terraplane. The range of this compact tool with both jaws is .393" or $^{25}/_{64}$" to 1¼".

Many other uses will be found for this little puller and it will earn its cost many times over.

Part Numbers

A-78 — BEARING PULLER COMPLETE .....

A-78-1—Body .....

A-78-2—Jaw Holder .....

A-78-3—Large Jaws (each) .....

A-78-4—Small Jaws (each) .....

A-78-5—Screw .....

A-78-6—Pin .....

A-78-7—Slide Bar .....

A-78-9—Nut .....

Water Pump Hub Pullers



No. 101

Designed to pull water pump or fan hubs and pulleys faster and without danger of bending the pulley. Remove the pump assembly from motor, disassemble fan blades, attach puller by fan cap screws, mount puller in vise and tighten the pressure screw to remove the pulley or fan hub from shaft.

Universal Puller No. 101 fits fan hub on practically all popular car models. The face is 3⅜" square with elongated screw holes to fit different hubs . . . the four curved lugs work over obstructions found on some pulleys.

No. 102 is specifically designed for Chevrolet models, 1938 through 1942. Pulleys on these cars are made of pressed steel and will bend unless pulled with uniform pressure . . . the bored out center of this tool fits snugly over the hub which absorbs all side strain when pressure is applied and prevents damage to the pulley. Tool also fits most G. M. trucks.



No. 101—UNIVERSAL Water Pump Hub Puller. Each .....

No. 102—CHEVROLET Water Pump Hub Puller. Each .....

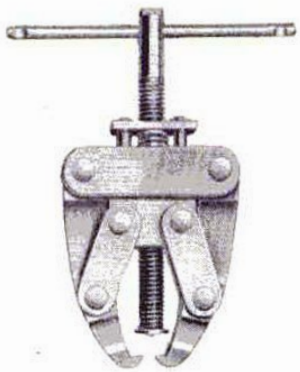
Blue-Point Battery Terminal Puller

ALSO ADAPTABLE TO MANY SMALL GEAR PULLING JOBS . . .

This new tool is unquestionably the finest puller for battery terminal work that we have seen. It has been *thoroughly tested on the job* in a number of different shops where it proved itself superior to other types of terminal pullers.

The unusual construction permits you to swing the jaws open to place them on the job, and the spring action on the yoke closes and holds them in position while the pressure screw is adjusted and tightened.

As seen by the illustrations, the tool is sturdily built and the pulling leverage is transferred to the jaws through the threaded crown and four lever arms . . . the harder the pull—the tighter the grip. The tool is also an excellent gear puller for any job within its range. Jaws spread 1⅝" and accommodate gears up to ¾" thick. Distance from pressure screw to jaw tips with jaws open is 1½".



CG-30 BATTERY TERMINAL PULLER. Each .....

Inlox Bushing Removers

These adaptors are designed for use with the CG-270 Gear Puller shown on page 66 and simplify the job of removing Inlox Bushings. The adaptor is placed at the end of the bushing so it will ride through the shackle . . . the pressure screw of the gear puller is centered on the end of the adaptor and the jaws placed around the opposite side of the shackle. Pressure applied to the screw will then quickly remove the bushing.



CG-275—SET OF 5 INLOX BUSHING REMOVERS

CG-275-1—1⅛" Bushing Remover. Each .....

CG-275-2—1$^{3}/_{16}$" Bushing Remover. Each .....

CG-275-3—1¼" Bushing Remover. Each .....

CG-275-4—1$^{5}/_{16}$" Bushing Remover. Each .....

CG-275-5—1⅜" Bushing Remover. Each .....

Gear Puller Screw Point Protectors

The pressure screws on Blue-Point and many other makes of Gear Pullers are designed with a tapered point which engages the center hole found on the end of most gear and wheel shafts, and serves to center the tool accurately on the job. Some shafts, however, have no center hole and in order to protect the tapered point of the screw from being damaged on the flat end surface of the shaft we can now furnish the set of Screw Point Protectors listed below.



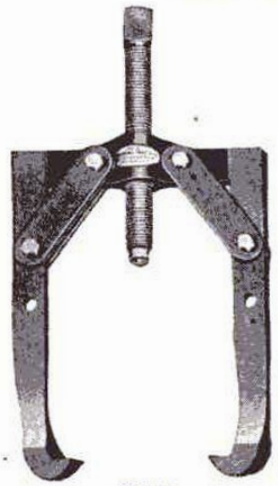
CG-10—SET OF THREE SCREW POINT PROTECTORS .....

CG-6—$^{3}/_{16}$" Screw Point Protector. Each .....

CG-7—¾" Screw Point Protector. Each .....

CG-8—1⅛" Screw Point Protector. Each .....

BLUE-POINT HEAVY DUTY PULLING TOOLS



GP-104

PROTECT your machinery from strong-arm wheel and gear pulling methods . . . properly built pulling tools will do the job quicker and easier and eliminate danger of breakage of expensive wheels or gears and costly delay or shut down of some badly needed equipment. Blue-Point Heavy Duty Pullers are available in two basic types . . . rigid arm and chain type—each having definite inherent advantages for specific jobs. Don't wait for the need to arise—equip now for any pulling emergency.

Check These Superior Features

1. Designed so that the harder the pull the tighter the jaws grip the work . . . jaw arms cannot fly off the job under tension.
2. Made with heavy one-piece forged steel yoke.
3. Heat treated forged steel jaw arms and straps.
4. Heat treated steel pressure screw has heavy duty fine thread and is pointed at the end to engage shaft centers.
5. Jaws are widely flared to increase gripping surface and prevent injury to the work.
6. Jaw arms have two or three hole adjustments to adapt them easily to different jobs.



2-Jaw Type Pullers

Number	Screw Length	Arm Reach	Gear Capacity	Adjusting Holes	Price
GP-203	12"	15½"	12"	3	
GP-104	16"	15½"	18"	2	
GP-204	16"	22"	18"	3	

Pitman Arm Puller



GP-134

GP-48 Pitman Arm Puller—A small, sturdy puller for removing Pitman arms, gears, pulleys, bearings, etc. Jaws can be clamped on the work and cannot slip. Open to 2 15/16".

3-Jaw Type Pullers

(Available only on Special Order)

A very rigid puller for use where 2-Jaw Pullers are not practical. Not carried in branch stocks.

Number	Screw Length	Arm Reach	Gear Capacity	Adjusting Holes	Price
GP-133	12"	9"	12"	2	
GP-233	12"	16"	12"	3	
GP-134	16"	15½"	18"	2	
GP-234	16"	22"	18"	3	



CHAIN-TYPE Universal Pulling Tools

Pulls everything . . . Gears . . . Pulleys . . . Wheels . . . Bushings . . . Pinions . . . etc. *regardless of distance from end of shaft*—built for lifetime service.

Truly universal, these tools will pull large spoked wheels and small solid gears with equal ease—close up or at a considerable distance from the end of the shaft. They will operate in the most awkward places, in close quarters, or will even pull over or through other pulleys or wheels—wherever the chains will lead.

Each chain is equipped with both Chain Hooks for use on spoked wheels, etc., and special Close-Grip Hooks to pull motor pulleys, bushings, pinions and shives, etc. Yoke is Certified Malleable Iron and pressure screw of Chrome Nickel Steel with hardened point; chains have forged links, welded and proof-tested well over their rated strength.

Our CHAIN-TYPE Puller has the effectiveness of several miscellaneous pullers and in any plant will find innumerable uses where it will save time and protect equipment.

2 Sizes—3 Ton or 12 Ton Capacity

GP-2 CHAIN TYPE PULLER—Equipped with 3 chains with ¼" diameter links, each 3 feet long—proof-tested over 2,000 lbs. each equipped with both chain hooks and close-grip motor pulley hooks. Shipping wgt. 19 lbs. Each.....

GP-4 CHAIN TYPE PULLER—Equipped with 3 chains with ½" diameter links, each 5 feet long—proof-tested over 8,000 lbs. each equipped with both chain hooks and close-grip motor pulley hooks. Shipping wgt. 76 lbs. Each.....

EXTRA HEAVY DUTY BLUE-POINT PULLER



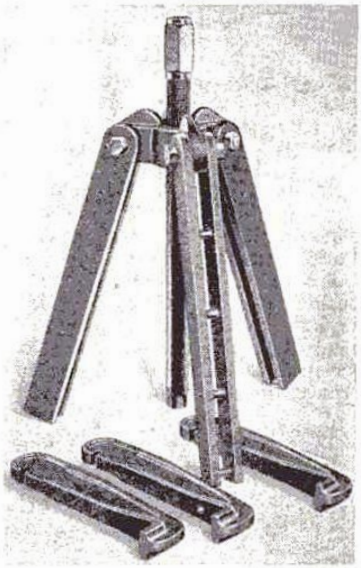
25 TONS OF PULLING POWER FOR HEAVY MACHINERY MAINTENANCE

Handles gears and pulleys up to 20" diameter and has a reach of 20". Is adaptable either as a three-jaw or two-jaw puller and exerts up to 25 tons of pressure . . . more than ample power to handle any job within its reach.

Jaws hook into either of three positions on the arms and are semi-locked there by friction balls. Yokes and jaws are newly developed heat treated malleable iron castings comparable in strength to heat treated alloy forgings, and the yoke is designed for either three-jaw or two-jaw attachment. The 1⅜" diameter screw has a hexagon head and can be turned with any standard 1½" wrench. Once set properly in place on the job, the jaws grip tighter with each turn of the pressure screw, and cannot possibly slip off the work.

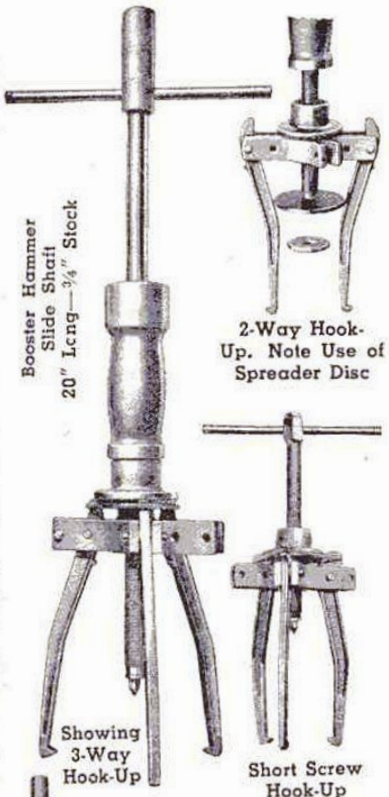
The rugged strength of this tool develops a gradual build-up of power which eliminates the smashing sledge blows and shocks which damage hubs, pulleys, bearings or other parts . . . it pulls those big tough jobs surely and safely.

CG-35 EXTRA HEAVY DUTY PULLER. Complete for three-jaw hook-up .....



UNIVERSAL PULLER TOOL

Patent Number 1,893,414



Booster Hammer Principle

YOU can handle all pulling jobs *easily—quickly—properly*—with the Snap-on Universal Puller Tool. The "booster hammer" principle provides definite advantages which ordinary types of pullers do not possess.

1. Booster Hammer gives a sudden, powerful blow, guided by the slide shaft in the same direction as the pull.
2. The guided blow combined with the center tension is much more effective than any other pulling force.
3. The pulling force is distributed equally on all sides—an important point, as an uneven pull causes the part being pulled to bind.

Combination 2 and 3-Way Yoke

The 2-Way Throw is used with the small Jaws for internal pulling jobs, sprockets, generator work, etc. The large jaws can be used on this throw for heavy work or where the 3-way throw cannot be used.

The 3-Way Throw is used with the large jaws for fan hubs, pulleys, and other external pulling jobs.

The Adjusting Nut and **Spring** hold the jaws at the desired position for attachment to the job and lock the jaws in against the part being pulled.

The Spreader Disc fits on the end of the shaft to spread the jaws for internal pulling work.

The Short Puller Screw adapts the tool to many jobs where the use of the longer handle is not practical. Booster hammer is not used with the short puller which can be turned with a wrench or the bar handle to obtain the necessary pressure.

Important Features

1. Simplicity of design—Easy and quick to use.
2. Shocking blow is in the direction of the work and not against the work.
3. Operator centers the blow, avoids possibility of binding.
4. Combination Yoke saves time—always ready for use.
5. New York Pins save time on every change of jaws.
6. Spring retainer holds jaws open at any desired point.
7. Takes such jobs as the following: **Sleeves** of all types using roller bearings; **Frozen Axle** or **Pinion Shafts; Generator Starter Bearings** and **Gears; Fan Hubs** and **Pulleys, Timing Gears; Grease Retainers** and **Spring Hangers; Many Bushings, Bearings, Universal Joint Flanges, Pitman Arms; Bearings** recessed in tubular members. Can be used as **Valve Guide Extractor** and many other pulling jobs.

Max. spread of large jaws on 3-way pull 6¼".
Min. spread of small jaws for placing through hole for inner pulling job ½".



CJ-66 Universal Puller—using 3-way yoke, large jaws, and booster hammer to pull a large metal timing gear.



The short screw used with a ratchet and socket wrench can be used to great advantage with the CJ-66 Puller to remove small timing gears such as this.

CJ-66 Universal Puller Set

Containing Long Puller Screw, Hammer, Yoke, 3 Large Jaws, 2 Small Jaws, Adj. Nut, 2 Spreader Discs, Spring, 3 Yoke Pins, Centering Adaptor and Bar Handle.

Universal Puller Tool Parts

Number	Description	Each
66-1	Long Puller Screw	
66-12	Short Puller Screw (not included in Set)	
66-2	Booster Hammer	
66-3	Combination Yoke	
66-A5	Large Jaws (External Pulling). Each	
66-A6	Small Jaws (Internal Pulling). Each	
66-A7	Adjusting Nut	
66-8	Spreader Disc (1²⁵⁄₃₂" diam.)	
66-8-1	Spreader Disc (1⅛" diam.)	
66-9	Yoke Pin	
66-10	Centering Adaptor	
66-11	Spring Retainer	
10-F	Bar Handle	

Bearing Race Remover and Accessories

BUILT solidly and compactly for removing tight bearing races of all kinds. Booster Hammer principle gives a powerful blow in the same direction as the pull.

Made in two sizes BR-15 for passenger cars and with a gripping range of 1¾" to 3"; and BR-16 for trucks and busses with gripping range from 3" to 5". Gripping unit has three fingers with flange that grips as they are expanded behind the bearing race, even when the race is flush with the housing.

BR-15 BEARING RACE PULLER. Complete..

BR-16 BEARING RACE PULLER. Complete..

Individual Parts Numbers

HEAD ASSEMBLY. Contains Parts Marked*	BR-15	BR-16
*Body	BR-15-B	BR-16-B
*Fingers (Set of 3)	BR-15-CF	BR-16-CF
*Small Exp. Plug	BR-15-E	BR-16-E
*Large Exp. Plug	BR-15-EE	BR-16-EE
*Ext. Large Exp. Plug	BR-15-EEE	
*Spring	BR-15-F	BR-16-F
*Finger Pins (Set of 3)	BR-15-G	BR-16-G
*Key for Plugs	BR-15-H	
Shaft	BR-15-A	BR-16-A
Hammer	BR-15-D	BR-16-D

Grease Retainer Puller



A remarkably efficient tool for pulling grease retainers . . . the thin, tapered jaws are pressed together, inserted through the grease retainer, and then allowed to expand to their normal open position behind it. The shaft and hammer of the BR-15 tool shown above are used with this unit to provide the pulling action.

BR-10—GREASE RETAINER PULLER. Each

Axle Pulling Adaptors



A complete range of Axle Adaptors for use with the BR-15 Bearing Race Puller. Unscrew the gripping unit from the end of the shaft and replace with the required axle adaptor.

BR-900—SET OF AXLE ADAPTORS

BR-2018—⅝" 18	BR-2818—⅞" 18
BR-2416—¾" 16	BR-3214—1" 14
BR-2420—¾" 20	BR-3612—1⅛" 12
BR-2616—13⁄16" 16	BR-4012—1¼" 12
BR-2814—⅞" 14	

Axle Pulling Attachment



Takes all sizes—is quick and easy to use. Used with the BR-15 Shaft and Hammer and is screwed onto end of shaft in place of the regular gripping unit. The three fingers exert a firm grip against the axle nut.

BR-9A—UNIVERSAL AXLE PULLING ATTACHMENT complete with BR-9-4 adjusting nut

Special Head for Chevy's



Designed to pull both the grease retainer and axle bearing in one operation on Chevy cars and trucks . . . also works on 8-40 and 8-60 1938 Buicks. Fingers are long enough to pull many grease retainers and bearings which standard pullers won't handle. Use with BR-15 shaft and hammer.

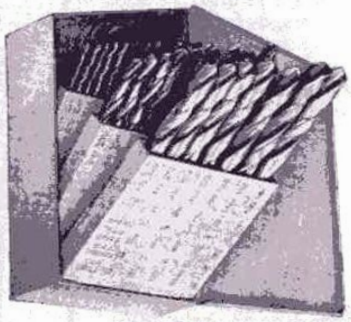
BRA-15A—CHEVY BEARING PULLER complete with BR-9-4 adjusting nut

BLUE-POINT HIGH SPEED DRILLS

These drills are not single purpose drills for special work but are constructed so as to show the best all-around performance in all classes of work. They are, therefore, ideal for garages, small machine shops, jobbing shops, etc.

HIGH SPEED DRILLS

Size	Price
★ 1/16"	
★ 5/64"	
★ 3/32"	
★ 7/64"	
★ 1/8"	
★ 9/64"	
★ 5/32"	
★ 11/64"	
★ 3/16"	
★ 13/64"	
★ 7/32"	
★ 15/64"	
★ 1/4"	
★ 17/64"	
★ 9/32"	
★ 19/64"	
★ 5/16"	
★ 21/64"	
★ 11/32"	
★ 23/64"	
★ 3/8"	
★ 25/64"	
★ 13/32"	
★ 27/64"	
★ 7/16"	
★ 29/64"	
★ 15/32"	
★ 31/64"	
★ 1/2"	



C-129 Set



C-113 Set

High Speed Drill Sets and Holders

These combination drill holders and gauges are most convenient. The H-113 Holder accommodates 13 drill sizes, 1/16" to 1/4" inclusive, and the H-129 holds 29 drills, sizes 1/16" to 1/2" inclusive. The hinged holders fold flat into the container which can be locked in your tool chest . . . it takes up very little room and protects your drills from damage and loss. Each drill compartment is marked, and the holder is in reality a convenient drill gauge.

C-113—DRILL SET. 13 Drills 1/16" to 1/4" in H-113 Holder.....
H-113—DRILL HOLDER Only. Each.....
C-129—DRILL SET. 29 Drills 1/16" to 1/2" in H-129 Holder.....
H-129—DRILL HOLDER Only. Each.....

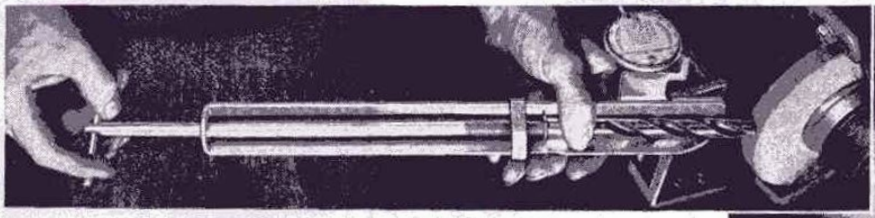
Set of Straight Shank Wire Gauge Drills

CH-160—DRILL SET. 60 Wire Gauge Drills Nos. 1 to 60 in H-160 Holder .....
H-160—DRILL HOLDER Only. Same design as C-129 illustrated. Each.

STRAIGHT SHANK WIRE GAUGE DRILLS

Size	Each	Size	Each
★ 1...		★31...	
★ 2...		★32...	
★ 3...		★33...	
★ 4...		★34...	
★ 5...		★35...	
★ 6...		★36...	
★ 7...		★37...	
★ 8...		★38...	
★ 9...		★39...	
★10...		★40...	
★11...		★41...	
★12...		★42...	
★13...		★43...	
★14...		★44...	
★15...		★45...	
★16...		★46...	
★17...		★47...	
★18...		★48...	
★19...		★49...	
★20...		★50...	
★21...		★51...	
★22...		★52...	
★23...		★53...	
★24...		★54...	
★25...		★55...	
★26...		★56...	
★27...		★57...	
★28...		★58...	
★29...		★59...	
★30...		★60...	

DRILL GRINDING ATTACHMENT

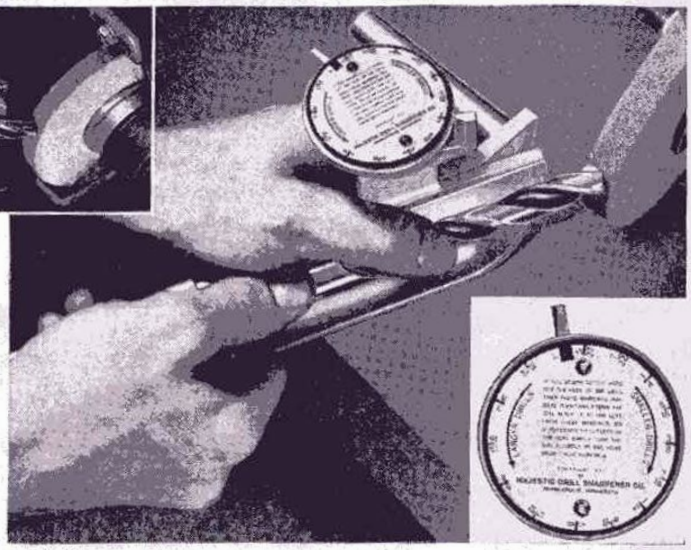


Drills properly sharpened cut faster and with greater accuracy . . . and cut more holes per drill.

This drill sharpener will put speed and accuracy into your drilling operations with drills correctly pointed and sharpened . . . drills that take just the right bite into the work and shave steadily without chatter or need for undue pressure and overload on your power equipment.

It is easy to install . . . simple to operate, and anyone can quickly use it. It will sharpen any drill size from 5/32" up to 1" diameter, taper length, taper shank, as well as straight drills, and can be set accurately to properly shape and sharpen them for efficient drilling in either soft or hard material. There's no guesswork about it . . . all the angles have been worked out for you . . . simply set the large indexed dial and pointer to the drill size you wish to sharpen, set the drill in the holding channel and grind. The quick swinging movement of the drill holder prevents burning the thin cutting edge while grinding, and the finished job is a drill with

1. A perfectly centered point.
2. Both cutting edges running down at the same angle from the center.
3. Both heels swinging back at the correct arc from the cutting edge.



Anyone can point and sharpen a drill accurately with this inexpensive, easy to use attachment.

. . . three points that must be accurate if the drill is to cut properly, and which cannot be arrived at in free hand sharpening. Complete, easily understood directions for installing and using come with each tool. Install this drill grinding attachment on any type of grinder, power or manually operated, and you'll quickly earn its low cost in longer drill life and time saved in drilling operations.

DG-10 DRILL GRINDING ATTACHMENT. Each.....



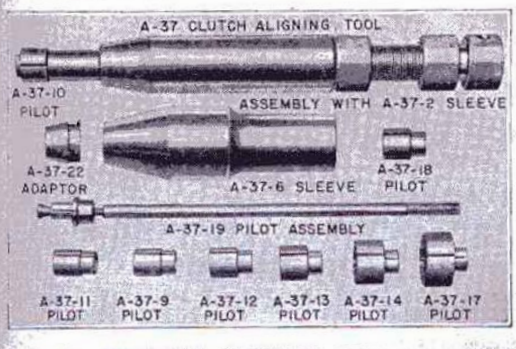
NOW ONE TOOL ALIGNS ANY SINGLE DISC CLUTCH ON CARS OR TRUCKS

Locks in Position—Leaves hands free

Patent Number 2,046,774

YOU can save from twenty minutes to an hour on every clutch job—with this *universal* Snap-on clutch aligner . . . it locks firmly in the clutch pilot bearing and leaves both your hands free to replace and tighten the compressor plate. When necessary, the tool can be operated through the bell housing.

This aligning tool does away with such slow and tiresome methods as using old splines and taking apart transmissions . . . gives you—in one tool—quick, accurate, clutch aligning service for the complete range of automotive single disc clutches.



It's simple to use . . . the correct size of expanding pilot is placed on the tool and locks securely in the pilot bearing—the sliding tapered sleeve is adjusted to center the clutch plate and hold it firmly in place while you complete the assembly.



The aligning tool is inserted into the shaft bearing and tightened in position, leaving both hands free for the clutch aligning work

A-37-B—CLUTCH ALIGNER SET. All units illustrated except A-37-6 Sleeve and A-37-17 Pilot. Services passenger cars and several light trucks. Furnished in 170-B Metal Box. .....

A-37-C—COMPLETE CLUTCH ALIGNING SET. All units illustrated in 170-B Metal Box. Services all cars and trucks.....

Pilots and Additional Parts

A-37-2—Small tapered sleeve. Each.....
A-37-6—Large tapered sleeve. Each.....
A-37-23-A—Inner sleeve (shaft 21/32" dia.). Each.....
A-37-22—Sleeve adaptor (for Hudson, Terraplane, Nash "400," LaFayette, Plymouth, Dodge). Each.....
A-37-19—Pilot assembly for Hudson-Terraplane. Each.
170-B—Metal Box. Each.....

Pilots

A-37-11—.590".....
A-37- 9—.625".....
A-37-12—.668".....
A-37-18—.718".....
A-37-10—.750".....
A-37-13—.786".....
A-37-14—.984".....
A-37-17—1.181".....

Cylinder Ridge Removers

NOW—*one ridge remover to handle practically everything except the largest trucks.* Its normal operating range of 2 9/16" to 4 7/8" includes such cars as the Ford V8-60 and other similar small bore jobs. An extra set of blades is available for cylinders up to 6". And that's not all . . . this tool comes in a metal box especially designed for it, richly finished in deep red baked-on enamel. Here's the tool you need to *eliminate "piston ping"* and give your customers a smooth running motor.

Usually the ridge occurs on one side of the cylinder only, and this tool is designed to properly remove this ridge without cutting into the opposite sides of the cylinder wall.

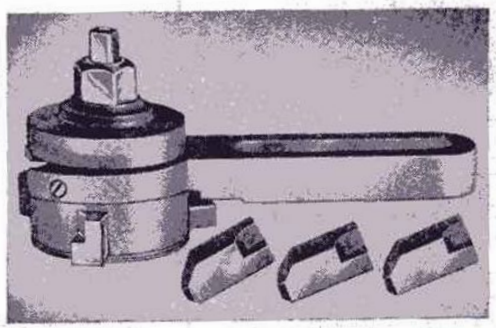
Three expanding cutters act as self-centering agents and are so shaped that the top portion only of each blade acts as a cutter and the bottom section as a guide to prevent chattering or removing too much metal. Two sets of cutters are provided, the smaller ones having a range from 2 9/16" to 3½" and the larger blades from 3½" to 4 7/8".

This tool will accurately remove ridges worn deeper on one side than on the other unless the cylinder wall is tapered more than .005 per inch or 1/8" per foot, which sometimes occurs in cylinders that have been reamed or reground. The clamp is bolted onto the cylinder block opposite the most pronounced part of the ridge. It covers a full range in one tool and does a better job quicker and easier.

WR-25—CYLINDER RIDGE REMOVER. With WR-25-4 and WR-25-3 Cutter Sets. Complete in specially designed WR-25-B Metal Box.....
★WR-25-3—Set of 3 Large Cutters, 3¾" to 4 7/8" capacity. Per set.....
★WR-25-4—Set of 3 Small Cutters, 2 9/16" to 3¾" capacity. Per set.....
★WR-25-5—Set of 3 Extra Large Cutters, 4 7/8" to 6" capacity for trucks. Per set.....

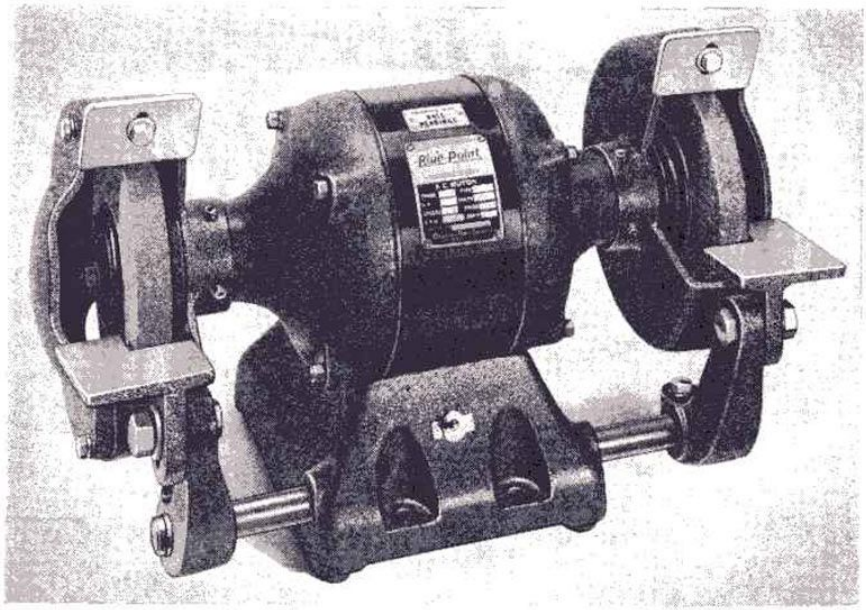
Special Large Model for Diesels, Tractors, Etc.

This tool is the same design as the WR-25 illustrated at right, but has a capacity of 4 7/8" to 8".
WR-20—CYLINDER RIDGE REMOVER. Complete with WR-20-4 Set of Cutters.....
WR-20-4—Set of 3 Cutters, 4 7/8" to 6 7/16" capacity. Per set.....
WR-20-5—Set of 3 Large Cutters, 6 7/16" to 8" capacity. Per set.....



WR-25 Cylinder Ridge Removing Tool, showing the set of small blades inserted ready for use . . . tightening the center nut expands the cutters.

For Twenty-five Years the Standard of Highest Quality



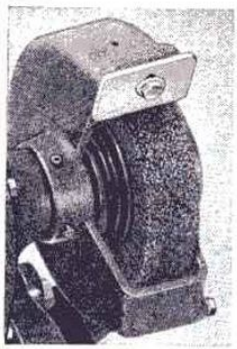
Blue-Point BENCH GRINDERS

ARE BUILT TO GIVE

SMOOTHER and more POWERFUL Operation

Many improvements are now incorporated into these new models, making them, in our opinion, the finest grinders available. They are larger and heavier and now have capacitor start and induction run motors, designed for continuous operation. The capacitor start is an important feature providing quick starting on low current consumption. All wheel guards are now the wide type to allow the use of wire wheel brushes on both sides of all grinders, and all are built with a rear exhaust outlet.

Guards Accommodate Wire Brushes



The extra wide wheel guards now furnished as standard equipment on both sides of all Blue-Point Bench Grinders add greatly to the adaptability of these machines. Wider or special purpose grinding wheels or wire wheel brushes can be interchanged with the standard wheels furnished with these grinders. Enclosed type guards provide maximum possible protection . . . rear exhaust outlets can be connected to industrial exhaust systems. Chip breaker is adjustable to allow for wheel wear.

Construction Features of Blue-Point Bench Grinders

1. **COMPLETELY ENCLOSED MOTOR:** Super powered, precision balanced motors are completely enclosed to prevent dirt, grit, etc., from entering motor or bearings.
2. **BALL BEARING CONSTRUCTION:** New oversize labyrinth grease sealed ball bearings used throughout assure smooth, long lived motor operation.
3. **CAPACITOR START MOTOR:** Uses a very low starting current . . . actually a current of less than 15 amps is consumed which meets all safety requirements.
4. **INDUCTION RUN MOTOR:** Develops less heat in the windings which makes it much more desirable for continuous operation.
5. **LARGE WHEEL GUARDS:** New wide enclosed type wheel guards allow the use of wider or special shape grinding wheels or wire wheel brushes. Rear outlets can be connected to an exhaust system for production work. Guards are fitted with sturdy chip breakers and are drilled to allow attachments of eye shields (see page 73).
6. **BELL TYPE CONSTRUCTION:** Provides full clearance across both wheels so that long straight pieces may be ground across the face of the machine without interference from the motor housing.
7. **STURDY TOOL RESTS:** Are completely adjustable for any type of work with ample take-up for wheel wear. Easily removed when not needed.
8. **LARGE RUGGED BASE:** Equipped with rubber feet and provides a solid mounting free from vibration. Has recessed bolt openings for permanent mounting.
9. **VOLTAGE:** Standard models of the ⅓ H.P. and ½ H.P. grinder require 110 Volt, 50/60 cycle AC current. Standard 1 H.P. grinder takes 220 volt 50 or 60 cycle AC current.

Bench Grinder Specifications

	No. 895	No. 855	Nos. 833-A & 833-AW
Motor Rating	1 H. P.	½ H. P.	⅓ H. P.
No Load Speed at 60 cycles	1740 R.P.M.	3450 R.P.M.	3450 R.P.M.
Spindle Length	26½"	19¼"	17"
Height to Spindle Center	9½"	8"	6¼"
Total Height	15"	12½"	10¼"
Wheel Size	10" Dia.	7" Dia.	6" Dia.
	¾" hole	⅝" hole	½" hole
Net Weight	155 Lbs.	80 Lbs.	55 Lbs.

Models and Equipment

No. 895—1 H.P. CAPACITY GRINDER, complete with two 10" wheels, one fine, one coarse.

No. 855—½ H.P. CAPACITY GRINDER, complete with two 7" wheels, one fine, one coarse.

No. 833-A—⅓ H.P. CAPACITY GRINDER, complete with two 6" wheels, one fine, one coarse.

No. 833-AW—⅓ H.P. CAPACITY GRINDER, complete with one 6" grinding wheel and one heavy duty wire wheel brush.

EQUIPMENT: Single phase grinders are equipped with heavy duty, toggle switch in base and rubber covered 3-wire cord and plug. Two and three phase machines have switch and lead wires for permanent wiring.

Standard and Special Bench Grinders Available

Types and Voltages	GRINDER No. 895		GRINDER No. 833-A		GRINDER No. 833-AW		GRINDER No. 855	
	Available	Price	Available	Price	Available	Price	Available	Price
SINGLE PHASE MOTOR 110 Volt 50/60 cycle A. C.	Special Model 50/60 Cycle		Standard Model		Standard Model		Standard Model	
SINGLE PHASE MOTOR 125 or 150 Volt 50/60 cycle A. C.	None		Special Models		Special Models		Special Models	
SINGLE PHASE MOTOR 220, 230, 240 or 250 Volt 50/60 cycle A. C.	Special Model 220 Volt only 50 or 60 Cycle		Special Models		Special Models		Special Models	
TWO-PHASE MOTOR 220, 440, or 550 Volt 50/60 cycle	Special Model		None		None		None	
THREE-PHASE MOTOR 220 Volt 50/60 cycle A. C.	Standard Model 50 or 60 cycle		Special Models		Special Models		Special Models	
THREE-PHASE MOTOR 440, or 550 Volt 50/60 cycle A. C.	Special Models		Special Models		Special Models		Special Models	
DIRECT CURRENT MOTOR 32 Volt	None		Special Models		Special Models		None	
DIRECT CURRENT MOTOR 115, 230 or 250 Volt	None		Special Models		Special Models		Special Models	

NOTE: When ordering please be sure to specify Bench Grinder Number, Motor Type and Voltage required. Also specify whether 50 or 60 cycle is needed when ordering No. 895 models.

NORTON ABRASIVE GRINDING WHEELS



High quality Norton wheels made from natural aluminous oxide abrasive . . . fully vitrified—the finest, best cutting wheels you ever used. 60 Grit wheels are grade "M" for fine general purpose work, 36 Grit wheels are grade "O" which is a harder grade and better for heavier and rougher grinding.

Stock No.	Diam.	Width	Grit	Arbor Hole	Price
★61636	6″	½″	36	½″	
★61660	6″	½″	60	½″	
★62436	6″	¾″	36	½″	
★62460	6″	¾″	60	½″	
★63236	6″	1″	36	½″	
★63260	6″	1″	60	½″	
★73236-5	7″	1″	36	⅝″	
★73260-5	7″	1″	60	⅝″	
★103224	10″	1″	24	¾″	
★103246	10″	1″	46	¾″	
★103260	10″	1″	60	¾″	



Abrasive Cup Grinding Wheel

This cupped wheel is a much more efficient tool when used on a hand type sanding and grinding machine than a flat grinding wheel, for it will provide greater contact and present a flat surface to the work and so will grind true surfaces more easily . . . used on the edge it will also do many other jobs sometimes done with ordinary flat wheels. Each wheel has a ⅝″ x 11 thread bushing molded integrally into the wheel.

For Cast Iron, Bronze, Unannealed Malleable Iron, White Iron				For Stud Castings, Stud Welds, Structural Members, Annealed Malleable Iron			
Stock No.	Dia.	Grain	Price	Stock No.	Dia.	Grain	Price
★SZ-5451	4″	Medium		★SZ-5459	4″	Coarse	
★SZ-5452	4″	Fine		★SZ-5460	4″	Fine	
★SZ-5455	5″	Coarse		★SZ-5463	5″	Coarse	
★SZ-5456	5″	Medium		★SZ-5464	5″	Fine	
★SZ-5457	6″	Coarse		★SZ-5465	6″	Coarse	
★SZ-5458	6″	Medium		★SZ-5466	6″	Fine	

Rubbing Pad



Only a felt pad has the necessary softness for polishing—composition pads are too hard and unyielding. This pad has a fiber backing and is attached to the flexible pad of the sander as you would a regular sanding disc.

★SZ-72-1—7″ FELT POLISHING PAD. Each .....

Lamb's Wool Buffing Bonnet



A high grade lamb's wool bonnet with thick, evenly trimmed wool pile . . . skin thoroughly tanned and treated to give long, satisfactory wear. Sturdy canvas side wall with draw string to pull tightly over the pad.

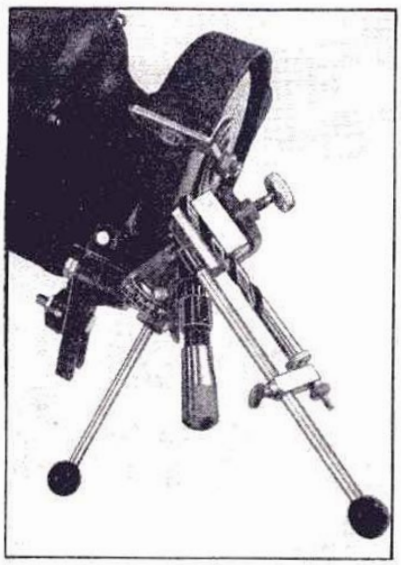
★SZ-72-2—LAMB'S WOOL BONNET. Each .....

Arbor Adaptor for Electric Drills



A-24—Special Arbor—Adapts Wheel Brush with ½″ arbor hole to ¼″ Electric Drill Chucks. Length overall 2½″. Each...

DG-30 Drill Grinding Attachment



It takes just about two minutes to sharpen any drill from ⅛″ to ½″ in diameter with this efficient grinding attachment, and you get a drill with both lips ground identical in length, clearance, and angle. The drill is centered and locked in a V-block chuck while an adjustable shank stop and special lip stop assure accurate rechucking for the grinding of the second lip. A micrometer feed screw calibrated in thousandths makes possible fine feed adjustments.

The chuck trunnion is indexed for adjusting drill angles from 40° to 80° with points 59° and 41° marked for fast adjustment to these standard angles. The radial chuck movement automatically gives the correct lip clearance of 12°

Easily attached to the grinder, the universal mounting bracket adapts itself to any wheel thickness. A set-up gauge is included to check alignment of the grinder spindle and mounting bracket shaft prior to operation.

DG-30—DRILL GRINDING ATTACHMENT. Each .....

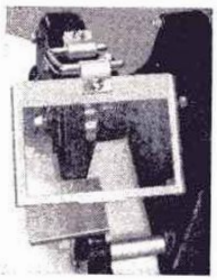
Floodlight Eye Shields



Two 25 watt, 115 volt supported filament-type light bulbs in each shield flood the work with direct light when the motor is running and provide proper visibility for safe work. The sturdy aluminum die cast frame has window opening 4″ x 6″ with one top sheet of safety glass and one bottom sheet of standard glass which is easily replaced if it becomes pitted. These shields are easily attached to any grinder, are adjustable up or down, but cannot be moved accidentally to a non-guarding position. Two bulbs, bolts and instructions for attaching are packed with each shield.

★S-60—FLOODLIGHT EYE SHIELD. Each.....

★S-60-1—EXTRA 25 WATT LIGHT BULBS. Each.....



Standard Eye Shields

Easily attached, these thick safety glass guards give clear vision of the grinding operation with adequate protection from flying particles. Frame swivels to best working position for the job.

★S-69—SPARK GUARDS. Per pair.....

Gas Cleaning Brushes



Ideal for jobs where an accumulation of oil and dirt must be washed off with gasoline. Made with a generous amount of stiff fibre bristles, tightly bound and finished with strong wire handles, these brushes can be used constantly or left standing in gasoline without the bristles swelling or softening. Handles can be bent to hang over the container edge. Use only with gasoline.

GA-57—SMALL CLEANING BRUSH (approximately 1″ dia.). Each.....

GA-58—LARGE CLEANING BRUSH (approximately 2″ dia.). Each.....



One Disc does the work of Many!

TRIPLE the service you get from each sanding disc . . . cut new edges on your old discs and use up every inch of effective sanding surface . . . with Snap-on's Abrasive Disc Trimmer.

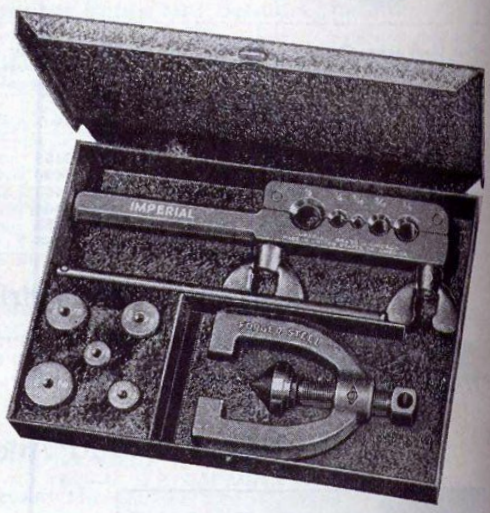
This money-saving machine makes one disc do the work of many . . . saves its cost several times over . . . by letting you trim worn discs down to the 5" pad size and even smaller if required. Any desired amount from 1/8" up to 1" can be trimmed off at one time . . . *and you get a perfect "circle-cut" with sharp, firm edges.* To operate—simply place the worn disc in the machine, set the cutter to the amount of trim desired, tighten the roller, and turn the handle! Nothing to take off—no nuts—no pins—no hand clamps. And no hard work—one revolution of the disc cuts it clear through. The Snap-on Abrasive Disc Trimmer handles both 1/2" and 7/8" hole discs up to 9" in diameter—and is precision built for years of service. Cutter wheels are keyed onto the shaft and cannot slip . . . gripper roller is adjustable to give proper roller tension for any disc thickness. Its 3-leg construction gives wobble-free mounting on uneven bench tops.

A-88—SANDING DISC TRIMMER.....

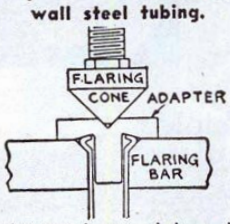
★A-88-6—Replacement Cutter Wheels. Each.....

"DOUBLE-FLARING" TUBING TOOL

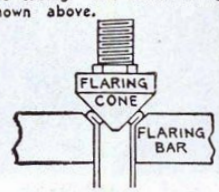
FOR THIN WALL STEEL TUBING



Illustrating the new simple way to double-flare thin wall steel tubing.



Flaring cone is screwed down with proper size adapter in place in the tubing. This bells tubing as shown above.



Cone is then backed off slightly, adapter removed and cone screwed down just as on a conventional flaring tool. The result is an accurate 45° double flare.

This new tool provides an economical, speedy, easy-to-operate tool for making accurate 45° double-flares on thin wall, soft steel tubing (such as Bundy) for S. A. E. flare and inverted flare joints, one that handles all popular size tubing and can be used right on the job. It will flare seamless, butt-welded or lap-seam-welded soft steel tubing having not over .035" wall, and insures tube against cracking or splitting by folding back the tube end to make a flare with double thick, double strength walls.

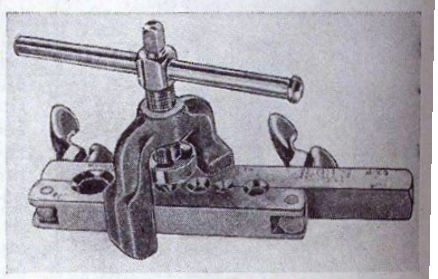
This tool can be used also for making single or double flares on soft copper or aluminum tubing. Yoke of tool is made of forged steel and is equipped with swivel type flaring cone. This type of cone reduces friction when flaring—an advantage especially important when working with larger sizes of tubing.

When tool is used in very close quarters, rod handle can be removed from yoke and a ratchet wrench applied to the 1/4" square on the head of the cone screw.

Complete tool includes flaring bar, yoke, and 5 adaptors. Handles 3/16", 1/4", 5/16", 3/8" and 1/2" O.D., thin-wall steel tubing.

★NO. 93-FB—DOUBLE FLARING TOOL, complete in metal case.....

Single Flaring Tool With Slip-on Yoke

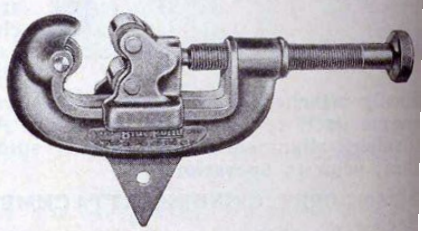


Providing exceptional ease and speed of operation the yoke of this tool is made so that it can be slipped on over the bar without twisting or turning. The inside edges of the yoke are slotted so that once in position a slight turn holds it in place on the other bar. The open bottom permits flare to be where little space exists between nut and tube end. Flares soft copper, brass, or aluminum tubing.

No. 193-F FLARING TOOL. Flares 3/16", 1/4", 5/16", 3/8", 7/16", and 1/2" O.D. tubing. Each .....

No. 195-F FLARING TOOL. Flares 1/4", 5/16", 3/8", 1/2", and 5/8" O.D. tubing. Each .....

Tubing Cutters



End your tube cutting troubles with a Blue-Point Tube Cutter . . . It cuts any copper, brass, bronze, or similar tubing from 1/8" to 1" diameter. The cutter wheel is made from exceptionally strong steel, and the very thin edge cuts cleanly through the entire thickness of the tubing—you don't have to wrestle the tube apart. The "V" blade is used for reaming the burrs.

TC-27—TUBING CUTTER.....

TC-27-W—Extra Cutter Wheel.....

BLUE-POINT WIRE BRUSHES

THE quality of material and workmanship built into this new line is the highest that modern methods can produce and the extremely long wearing characteristics of these units are a triumph of manufacturing achievement. Blue-Point Wire Brushes will outlast any other similar tool on the market.

Made of high quality, selected wire and metal bound to prevent dangerous chips from flying loose—crimped wire bristles prevent bending or breaking.

Standard Wheel Brushes

A good quality brush comparing most favorably with other makes of similar standards but not quite as strong and durable as the heavy duty brushes listed at right.

No.	Diam.	Width	Arbor Hole	Price
★ A-33	6″	¾″	½″ to 2″	
★*A-34	8″	⅞″	½″ to 2″	
★*A-35	10″	1″	¾″ to 2″	
★*A-36	12″	1⅜″	1″ to 2″	

Heavy Duty Wheel Brushes

The best quality, long life brushes, built for continuous heavy service in everyday work.

No.	Diam.	Width	Arbor Hole	Price
★ A-26	6″	1⅛″	½″ to 2″	
★*A-27	7″	1¼″	½″ to 2″	
★ A-28	8″	1⅜″	½″ to 2″	

*Available on factory order—not carried in branch stock.

Super Duty Wire Wheel Brushes

Tire retreading shops will find these Super Duty wire wheels especially valuable, as they are available up to 4¼″ wide and are constructed of finer wire which will stand the strain of constant flexing without breaking much longer than ordinary wire wheels.

The wires are packed so densely that the cutting action resembles a coarse abrasive stone . . . the resiliency is such, however, that it lends itself to cleaning irregular surfaces without scoring. Especially effective in removing rubber, scale, carbon, etc. Not recommended for cleaning greasy fittings. Recommended Spindle Speeds—

Dia. of Wheel	Min. R.P.M.	Max. R.P.M.
4″	3000	3750
6″	2500	3500
8″	2200	3200
10″	1800	3000

Stock No.	Diam.	Face Width	Price
★A-641	4″	1″	
★A-642	4″	1½″	
★A-643	4″	2″	
★A-644	4″	2½″	
★A-662	6″	1¼″	
★A-663	6″	1¾″	
★A-664	6″	2¾″	

Stock No.	Diam.	Face Width	Price
★A-665	6″	3¼″	
★A-882	8″	1⅜″	
★A-883	8″	2″	
★A-884	8″	2⅝″	
★A-885	8″	3¼″	
★A-886	8″	3⅞″	
★A-690	10″	1½″	

Stock No.	Diam.	Face Width	Price
★A-691	10″	2″	
★A-692	10″	2½″	
★A-693	10″	3″	
★A-694	10″	3½″	
★A-695	10″	4″	
★A-696	10″	4¼″	

Each wheel is complete with one pair of adaptors. Size of arbor hole must be specified on order.
Size Arbor Hole for 4″ Diameter Brush: ¼″, ⅜″, ½″, ⅝″, ¾″, 1″
Size Arbor Hole for 6″, 8″, 10″, 12″, and 15″ Diameter Brush: ⅜″, ½″, ⅝″, ¾″, ⅞″, 1″, 1⅛″, 1¼″, 1½″, 1¾″
Adaptors, Per Pair

Hand Brush and Scraper

Refillable all metal crimped wire hand brush, with scraper attachment. These tools will outlast several of the old style wood handle brushes.

★A-65—HAND BRUSH AND SCRAPER. Each . . . . . .

★A-61—Crimped Refill for A-65. Ea. . . . . .
★A-62—Straight Refill for A-65. Ea. . . . . .
★A-63—Scraper Blade only. Each. . . .

Wood Handle Wire Brush

A good quality wood handle type of brush with bristles metal bound to prevent their coming loose and to give better service and durability. Built of sturdy material throughout and offering an inexpensive tool that compares favorably with other makes of its kind.

★AC-58—WIRE BRUSH. Each. . . . . .

Spiral Twist Carbon Brush

★A-7—This brush, composed of a number of tightly twisted spirals of high quality .020″ steel wire will quickly remove the hardest carbon deposits. Its construction provides unusually long service. Brush diameter 1⅛″; stem diameter ¼″. Each. . . .

Wire Cup Brushes

Sturdy, well-constructed brushes that will stand up under long, tough cleaning work. They have a ⅝″ x 11 thread bushing welded integrally for mounting direct to the sander spindle in place of the flexible pad.

Finest quality steel wire is used, inserted in twisted tufts to give the greatest strength and durability.

★A-2464—3½″ diameter. Each. . . . . .

★A-2465—6″ diameter. Each. . . . . .

Heavy Duty Carbon Brush

★A-3—Fits ¼″ Electric Drill. Made of crimped, bright music wire—for cleaning carbon from cylinder heads, cylinder blocks and ports. Fast and easy to use. Each.

Standard Carbon Brush

Similar in design to the A-3 for use on flexible shaft for cleaning carbon around cylinder heads, etc.

★A-2—With Crimped Wire. Each. . .



Wire Wheel Brushes



Cup Brushes



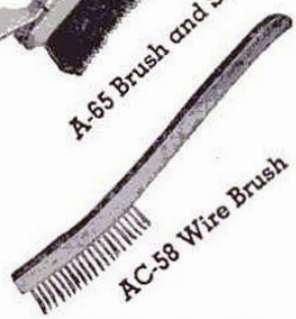
A-3 Carbon Cleaning Brush



A-7 Carbon Cleaning Brush



A-65 Brush and Scraper



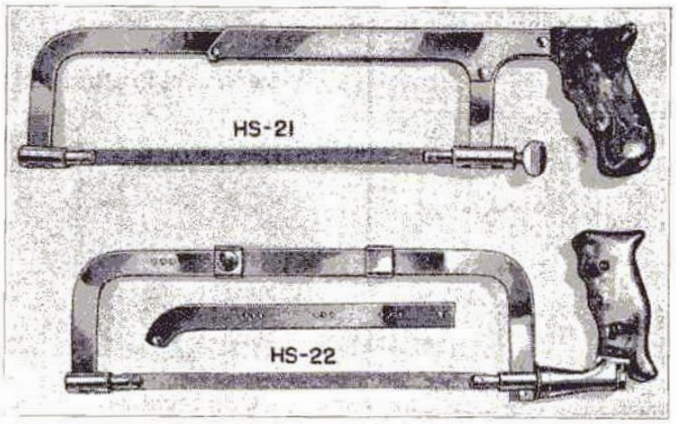
AC-58 Wire Brush

For Twenty-five Years the Standard of Highest Quality

Hack Saw Frames and Blades

Nu-Type Blue-Point Hack Saw Frames

HERE are two hack saw frames that are "tops" in performance. Ruggedly constructed to withstand hard use, they are nevertheless provided with several new adjustments which make it possible to use them in places where the ordinary hack saw would be useless.



NEW FEATURES: Adjustable for 8", 10", or 12" blades, both frames have an improved method for holding the blade. An adjustable swivel allows the blade to be set at a 22½, 45, or 90 degree angle to the frame and at any position up or down the frame legs. This permits adjustment of the blade to get into a 1½" space and yet saw to a depth of 3¼". When the blade is adjusted and tightened, it is positively locked so there can be no twist or unnecessary flexibility, thus eliminating approximately 75 per cent of blade breakage. While replacing a blade there is no part of the frame that will fall apart to get lost, since the bottom of each frame leg is swaged at four points to keep the slotted blade terminals always on the frame.



Blades are easily removed by releasing the tension and sliding the terminal up the frame leg as illustrated.

The frames are chrome-plated and highly polished, while the newly designed pistol grip handles are moulded of an exceptionally durable plastic.

The HS-21 frame is designed with the rear leg and handle base in one piece, thus increasing rigidity between the handle and the hack saw blade itself.



The handle of the HS-22 is mounted in a straight line with the blade so that, when sawing, the blade is given a direct "push-pull" action with the power always delivered along the line of the blade. The universal mounting permits the handle to be turned at any angle to the frame, increasing accessibility of the saw and permitting the handle to be kept in a vertical position with relation to the blade itself.

An extra short leg is included with the HS-22 which can be installed in place of the regular forepart as illustrated, thus creating a narrow frame saw which can then be used where only an approximate clearance of from 1½" to 1¾" is available.

★**HS-21—Hack Saw Frame** as illustrated. Each.....

★**HS-22—Hack Saw Frame** complete with additional short leg as illustrated. Each.....

Standard Hack Saw Frame



High grade hack saw, reasonably priced. Sturdily built to give rigid stability under all cutting conditions. Comfortable metal pistol grip securely riveted to the frame . . . frame length is adjustable and will accommodate blades 8", 10", or 12" long. Gun Metal Finish.

★**HS-1B—STANDARD HACK SAW FRAME.** Each.....

"Lenox" *Hackmaster* Blades

An Unbreakable Hand Blade



An exceptional saw made of Molybdenum High Speed Steel that has the back of the blade annealed so as to make it unbreakable, and the tooth edge hardened for durability. Has all the cutting qualities of the standard Molybdenum High Speed Blade.

ADVANTAGES. May be used under all awkward sawing conditions, or by inexperienced men, with complete satisfaction and fast cutting speed.

BREAKAGE ELIMINATED. Inasmuch as this is a non-breakable blade it will withstand hard usage, even misuse, without shattering. Sharp twists and kinks, which are the main reason for saw breakage, are absorbed without damaging this blade.

SAFETY. The use of this new Safety Hand Blade materially reduces the hazards and accidents of sawing operations.

Stock Numbers and Specifications

Hackmaster Molybdenum High Speed Unbreakable Hand Blades

Stock Number	Length In Inches	Teeth Per Inch	Price Each	Up to One Gross Per Dozen	Up to Five Gross Per Gross	Over Five Gross Per Gross
LHS-1018	10"	18				
LHS-1024	10"	24				
LHS-1032	10"	32				
LHS-1214	12"	14				
LHS-1218	12"	18				
LHS-1224	12"	24				
LHS-1232	12"	32				

Standard Hack Saw Blades

Made by special process from select tungsten steel to insure a tough, uniform temper and degree of hardness throughout the entire blade . . . They cut faster, easier, and retain their cutting power longer. Blue-point Hack Saw Blades are the result of many years experience in blade manufacture and are of the highest possible quality.

Package (12 Blades) Stock No.	Length and Width	Gauge Thickness	Teeth per Inch	Blade Series	Price per Pkg.
★HS-1032	10" x ½"	.025	32	Fine	
★HS-1232	12" x ½"	.025	32	Fine	
★HS-1024	10" x ½"	.025	24	Medium	
★HS-1224	12" x ½"	.025	24	Medium	
★HS-1018	10" x ½"	.025	18	Coarse	
★HS-1218	12" x ½"	.025	18	Coarse	

De Luxe Hack Saw Frame



Good, solid, rigid construction and perfect balance reduce any possibility of blade "whip" and breakage and make this hack saw a pleasure to work with. The handle and rear portion are a one-piece design with hand aperture large enough for ample knuckle clearance . . . red pyralin hand grips give a firm hold and stand out in effective contrast to the full-plated and highly polished frame.

Note how the handle is underslung and so designed that the power is delivered along the line of the blade . . . resulting in easier, faster cutting. Accommodates all standard blades.

★**HS-11-A—DE LUXE HACK SAW FRAME.** Each.....

Blue-Point Junior Hack Saw



★**A-51**—The ideal saw for use in very close quarters. Sturdy construction, holding the blade with a powerful, non-buckling grip. Blades 6" x 5/16", with 32 teeth to the inch.

★**A-51**—Junior Hack Saw complete with one blade.....

★**No. 6**—Packet of twelve blades.....

Broken lots, any type except "High Speed," per blade.....

NUCUT FILES

MECHANICS have long recognized the high quality of Nucut Files . . . made from high grade alloy steel of special formula, these tools will continue to do good cutting long after ordinary files would have worn smooth. *Every file is the same high grade* . . . adherence to rigid manufacturing and hardening processes eliminates any variance between different batches of finished files.

Mill Bastard Series

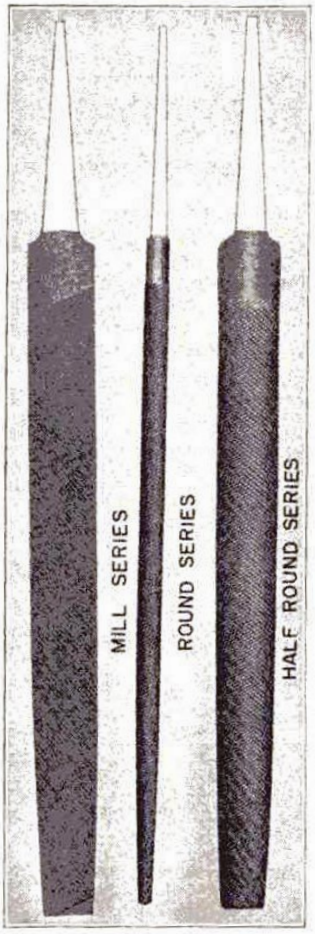
No.	Length	Price
★6-M	6″	
★8-M	8″	
★10-M	10″	
★12-M	12″	
★14-M	14″	
★16-M	16″	

Half Round Bastard Series

No.	Length	Price
★6-HR	6″	
★8-HR	8″	
★10-HR	10″	
★12-HR	12″	

Round Bastard Series

No.	Length	Price
★6-R	6″	
★8-R	8″	
★10-R	10″	
★12-R	12″	



Wood File Handle



These handles have a metal ferrule which is molded right into the wood . . . providing a sure grip and preventing danger of splitting the handle.

★No. 102-E— 6″ to 8″ FILE HANDLE. Each.....
★No. 103-E— 8″ to 10″ FILE HANDLE. Each.....
★No. 104-E—12″ to 16″ FILE HANDLE. Each.....

Flex-Stones



Economical—longer lasting—flexible . . . made from a plastic material imbedded with highly vitrified abrasive. Flex-Stones are flexible and will not break under side pressure . . . they will cut materials and handle jobs which a file cannot cut or cannot touch, and offer a better method of truing up ignition and spark plug points. Non-conductor of electricity.

★GA-3—FLEX-STONES. Each.....
★GA-43—THIN FLEX-STONE (.025″). Ideal for Voltage Regulator work. Each.....

Tungsten Ignition Point File



A fine double-cut tungsten file, the type preferred by most mechanics for filing spark plug points and distributor points . . . also useful in cleaning contact points of magnetos, electric bells, switches, and for small work on radios, etc.

★5-TP—IGNITION POINT FILE. Each...
★5-TPC—IGNITION POINT FILE, fitted with pocket clip. Each.....

Circular Hole Saws

High speed steel used in these saws makes them far superior to the ordinary type of tool. The saws are interchangeable on two sizes of mandrels, the smallest taking saws up to 1½″, the other 1⅝″ to 3½″ diameter. **Note:** The saw blade being spot welded around the outside of mandrel flange, it can be used the full depth of the tool and in exceedingly close places.



HS-31—MANDREL. With ¼″ Pilot Drill (Fits saws ⅝″ to 1½″ diameter.) Each .....

HS-33—MANDREL. With ¼″ Pilot Drill. (Fits saws 1⅝″ to 3½″ diameter.) Each .....

No.	Dia.	Price	No.	Dia.	Price	No.	Dia.	Price
★HS-20-A	⅝″		★*HS-52-A	1⅝″		★*HS-84-A	2⅝″	
★HS-24-A	¾″		★*HS-56-A	1¾″		★*HS-88-A	2¾″	
★HS-28-A	⅞″		★*HS-60-A	1⅞″		★*HS-92-A	2⅞″	
★HS-32-A	1″		★*HS-64-A	2″		★ HS-96-A	3″	
★HS-36-A	1⅛″		★*HS-68-A	2⅛″		★*HS-100-A	3⅛″	
★HS-40-A	1¼″		★*HS-72-A	2¼″		★*HS-104-A	3¼″	
★HS-44-A	1⅜″		★*HS-76-A	2⅜″		★*HS-108-A	3⅜″	
★HS-48-A	1½″		★*HS-80-A	2½″		★*HS-112-A	3½″	

*Not Carried in Stock . . . Shipped on Special Order Basis.

Grinding Wheel Dresser



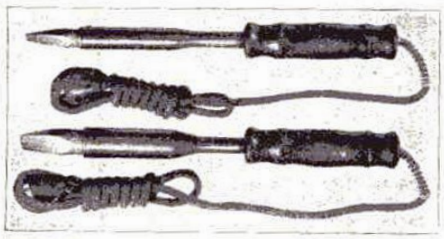
It takes only a few seconds to clean up the grinding face and remove the glaze—and you'll do a better, faster job with the cleaned wheel. The hood protects your face from emery dust.

★WD-11—WHEEL DRESSER. With extra set of cutters.....
★WD-11A—Set of extra cutters. Per set.....

Soldering Irons

Offered in two sizes . . . for radio and other light work use GA-20; it is fast heating and holds the heat long enough for any light work. For all heavy soldering we recommend the GA-38 . . . this iron has a large heavy tip and heats very rapidly—it will hold the heat much longer than smaller irons. The solid compressed copper tips are easily replaceable. Sizes listed are for 105 to 120 volts, A.C. or D. C. We can furnish on special order tools wound for 210 to 240 A.C. or D.C.

★GA - 20 — 100 W. IRON. ½″ Tip...
★GA-20A — Extra ½″ Tip .....
★GA - 38 — 275 W. IRON. 1⅛″ Tip..
★GA-38A—Extra 1⅛″ Tip .....



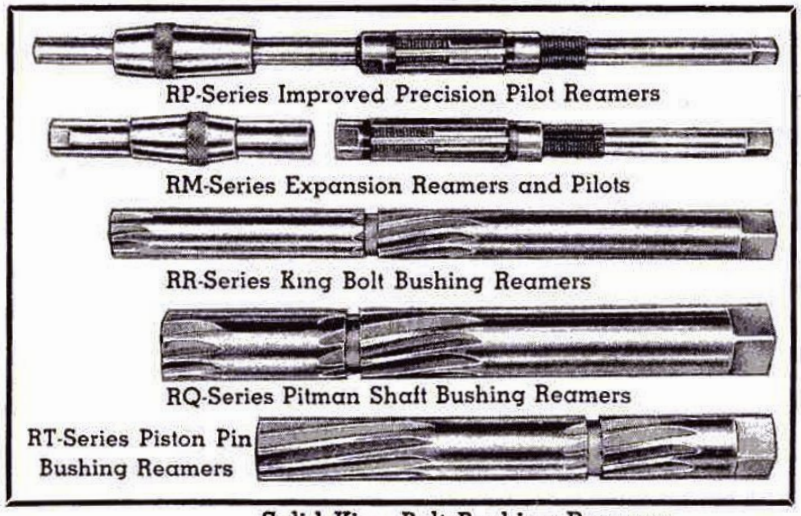
IMPROVED PRECISION
CRITCHLEY TYPE
BLADED REAMERS
(Long Style for Line Reaming)

With Double Taper, Counter Sunk Pilot Bushings

The Precision Pilot Way Is the Best Way to Ream to Get Perfect Alignment on King Bolt Bushings . . . Spring Shackle Bushings . . . Pitman Arm Bushings . . . Piston Pin Bushings Water Pump Bushings . . . Tie Rod Bushings

Eliminate reaming worries . . . a set of these modernly constructed reamers will thoroughly equip your shop to handle all reaming jobs quickly and to the accurate split thousandth of an inch—and at very reasonable investment cost. These tools have *seven blades* placed at the proper angle to give a smooth shearing cut . . . Retaining collars are placed at each end of the blades to protect the reamer nuts, hold the blades firm, and allow the reamer to be easily adjusted.

There are two positive guides. The pilot bushing guides the front and the parallel blades guide the back . . . each reamer expands to the contracted size of the next larger reamer so that a complete set of fifteen reamers will ream all sizes from 7/16" to 1 3/4". The pilot bushing slides over the nut and collar of the reamer and follows after the blades as they are expanded, making a very practical piloted reamer for short bushings.



Individual Reamers

Number	Reamer Size	Reamer Length	Price
★RP-437	7/16"—1/2"	9 1/4"	
★RP-500	1/2"—9/16"	9 1/4"	
★RP-562	9/16"—5/8"	9 1/4"	
★RP-625	5/8"—11/16"	9 1/4"	
★RP-687	11/16"—3/4"	12 1/4"	
*★RP-730	.730"—13/16"	12 1/4"	
★RP-812	13/16"—7/8"	12 1/4"	
*★RP-860	.860"—15/16"	12 1/4"	
*★RP-915	.915"—1"	12 1/4"	
*★RP-985	.985"—1 1/16"	12 1/4"	
★RP-1062	1 1/16"—1 1/8"	12 1/4"	
★RP-1125	1 1/8"—1 1/4"	13"	
★RP-1250	1 1/4"—1 3/8"	13"	
★RP-1375	1 3/8"—1 1/2"	13"	
★RP-1500	1 1/2"—1 5/8"	13"	

*RP-730 will ream Chevy 6 King Bolt Bushing, size .735"
*RP-860 will ream Chevy 6 Piston Pin Bushing, size .886"
*RP-915 will ream Chevy 6 Truck King Bolt Bushing, size .922"
*RP-985 will ream Chevy 6 Piston Pin Bushing, size .991"

Precision Pilot Reamer Sets

★RP-16B—REAMER SET. Contains four REAMERS sizes RP-437 to RP-625 (cutting range 7/16" to 1 1/16") in neat metal box.....

★RP-17B—REAMER SET. Contains seven REAMERS sizes RP-687 to RP-1062 cutting range 11/16" to 1 1/8" in neat metal box.....

Critchley Type Expansion Bladed Reamers and Pilots (Short Style)

With 6 and 7 Staggered or Unevenly Spaced Blades at the Proper Angle and Retaining Collar at Each End of Blades.

The extra blade on the larger sizes and the retaining collar make the tool more solid, less liable to chatter . . . doubles the life of the reamer.

Reamer Number	Reamer Price	Pilot Number	Pilot Price	Reamer Size	Blade Length	Over-all Length	No. of Blades
★RM-468		RMP-468		15/32"—17/32"	2"	5 1/4"	6
★RM-531		RMP-531		17/32"—19/32"	2"	5 1/4"	6
★RM-593		RMP-593		19/32"—21/32"	2 1/4"	6 1/4"	7
★RM-656		RMP-656		21/32"—23/32"	2 1/4"	6 1/4"	7
★RM-718		RMP-718		23/32"—25/32"	2 1/2"	7 1/4"	7
★RM-781		RMP-781		25/32"—27/32"	2 1/2"	7 1/4"	7
★RM-843		RMP-843		27/32"—15/16"	3"	8 1/4"	7
★RM-937		RMP-937		15/16"—1 1/16"	3"	8 1/4"	7
★RM-1062		RMP-1062		1 1/16"—1 3/16"	3 1/2"	10"	7
★RM-1187		RMP-1187		1 3/16"—1 15/32"	3 1/2"	11"	7
★RM-1343		RMP-1343		1 11/32"—1 13/32"	4"	12"	7
★RM-1531		RMP-1531		1 17/32"—1 29/32"	4"	13"	7

Reamer and Pilot Sets

★RM-1—REAMER SET. Contains eight REAMERS (without pilots) sizes RM-468 to RM-937 (cutting range 15/32" to 1 1/16") in neat metal box..

★RM-3—REAMER SET. Contains above eight REAMERS with PILOTS attached, in neat metal box.....

Solid King Bolt Bushing Reamers

Reamer Number	Description	Reamer Size	Price
★RR-8135	For all A, B, and V-8 Ford Cars	.8135	
★RR-10045	For all AA, BB, and V-8 Ford Trucks up to and including 1937	1.0045	
★RR-6885	For 8 and 10 H.P. English Ford	.6885	
★RR-867	For 1937 to 1941 Knee Action Models	.867	
★RR-7353	For all Chevy 4 and 6 cylinder cars, 1928 to 1941; all Pontiac cars, 1928 to 1936 (except knee action models); Plymouth 1933 PC and PD, and 1934 PF and PG models	.7353	
★RR-10688	For all Chevrolet and Pontiac 1934, 1935, and 1936 Knee Action Models	1.0688	
★RR-5625	For all Chevrolet 4 cylinder cars	.5625	
★RR-922	For all Chevrolet 6 1½ ton Trucks	.922	
★RR-7965	For Plymouth 1934 PE, all Plymouth and Dodge models 1935 to 1941 incl., and some Chrysler and DeSoto models	.7965	
★RR-751	For all Plymouth 4 cylinder models (also Piston Pin Bushing)	.751	
★RR-876	For all cars with 7/8" king bolt bushing	.876	
★RR-932	For Chevy 6 1½ ton truck with oversize king bolts	.932	
★RR-1130	For all 1938 to 1941 1½ Ton V-8 Ford Trucks	1.130	

Solid Piston Pin Bushing Reamers

Reamer Number	Description	Size Front	Size Back	Price
★RT-750-A	For Ford V-8 cars and trucks (except 60 H.P.) standard size	.750	.751	
★RT-750-S	For Ford V-8 cars and trucks (except 60 H.P.) .005 oversize	.755	.756	
★RT-1000	For Ford A and AA, B and BB cars and trucks standard size	1.000	1.001	
★RT-1000-2	For Ford A and AA, B and BB cars and trucks .002 oversize	1.002	1.003	
★RT-1000-5	For Ford A and AA, B and BB cars and trucks .005 oversize	1.005	1.006	
★RT-1001	For all cars with 1" piston pins (except Fords) standard size	1.001		
★RT-6885	For Fords, 60 H.P., standard size	.6885		
★RT-6885-5	For Fords, 60 H.P., .005 oversize	.6935		
★RT-990	For Chevrolet Six 1929 to 1936 Inclusive Standard size	.990	.990	
★RT-990-3	For Chevrolet Six 1929 to 1936 Inclusive .003 oversize	.993	.994	
★RT-990-5	For Chevrolet Six 1929 to 1936 Inclusive .005 oversize	.995	.996	
★RT-990-10	For Chevrolet Six 1929 to 1936 Inclusive .010 oversize	1.000	1.001	
★RT-990-15	For Chevrolet Six 1929 to 1936 Inclusive .015 oversize	1.001	1.006	
★RT-751	For all 4 cyl. Plymouth (including king bolt bushing), all Essex 1923-1934, Hudson 1930-1935	.751		
★RT-860	For all 6 cyl. Plymouth and all Chrysler 1932-1935 and all DeSoto 1932-1935	.860		
★RT-876	For Packard 1926 to early 1934 and all cars with 7/8" Piston Pins	.876		
★RT-866	For Chevrolet Six 1937 to 1941 Standard Size	.866		
★RT-871	For Chevrolet Six 1937 to 1941, .005 oversize	.871		

Solid Pitman Shaft Bushing Reamers

Reamer Number	Description	Reamer Size	Price
★RQ-1251	For Ford V-8 1½ ton truck 1932 to 1941 inclusive	1.251	
★RQ-1126	For Ford A, AA, B, BB, & V-8 cars and trucks (except V-8 1½ ton) and Chevrolet 1935 to 1940 incl. Master and DeLuxe Cars & 1936 to 1941 incl. Chev. trucks	1.126	
★RQ-1001	For Chevrolet 1931, 1932, & 1936 Standard car, 1933 and 1934 Master car, and 1931 to 1935 (incl.) truck	1.001	
★RQ-876	For Chevrolet Standard car, 1933 to 1935 incl.	.876	

EXTRA LONG ALIGNING EXPANSION REAMERS

For Reaming Motor Bearings

And any other job where it is necessary to bring two bearings into perfect alignment.



One of the most frequent jobs on electric motors is the installation of new shaft bushings which, to assure a true bearing, must be line reamed.

These new long reamers are made to handle this job accurately to a split thousandth of an inch and at a reasonable investment cost. The tools have seven blades placed at the proper angle to give a smooth shearing cut.

The reamer must be kept sharp to do good work. It should always be expanded enough to take a light cut. Turning the reamer when it is not cutting dulls it very rapidly. It should never be turned backward.

For best results, reamers requiring new blades should be returned to the factory.

★RL-19—REAMER SET Contains Six Extra Long Aligning Expansion Reamers, including RL-500—1/2", RL-625—5/8", RL-687—11/16", RL-750—3/4", RL-812—13/16", and RL-1000—1" Reamers.

Stock No.	Size	Length Overall	Full Length of Pilot Inc. Nut & Collar	Length of Blades	Length of Shank	Price
★RL-500	1/2"— 9/16"	15"	10 3/4"	2"	1 1/4"	
★RL-562	9/16"— 5/8"	15"	10 3/4"	2"	1 1/4"	
★RL-625	5/8"— 11/16"	16"	11 3/4"	2"	1 1/4"	
★RL-656	21/32"— 23/32"	16"	11 3/4"	2"	1 1/4"	
★RL-687	11/16"— 3/4"	17"	12 3/4"	2"	1 1/2"	
★RL-750	3/4"— 13/16"	18"	13 1/2"	2"	1 1/2"	
★RL-781	25/32"— 27/32"	19"	14 1/2"	2"	1 1/2"	
★RL-812	13/16"— 7/8"	19"	14 1/2"	2"	1 1/2"	
★RL-875	7/8"— 15/16"	19"	15 1/2"	2"	1 1/2"	
★RL-937	15/16"—1"	20"	16 1/2"	2"	1 1/2"	
★RL-1000	1" —1 1/16"	21"	16 1/2"	2"	1 1/2"	
★RL-1031	1 1/32"—1 3/32"	21"	16 1/2"	2"	1 1/2"	
★RL-1062	1 1/16"—1 1/8"	21"	16 1/2"	2"	1 1/2"	
★RL-1125	1 1/8"—1 1/4"	24"	17 1/2"	3"	2 1/4"	
★RL-1250	1 1/4"—1 3/8"	24"	17 1/2"	3"	2 1/4"	
★RL-1375	1 3/8"—1 1/2"	24"	17 1/2"	3"	2 1/4"	
★RL-1500	1 1/2"—1 5/8"	24"	17 1/2"	3"	2 1/4"	

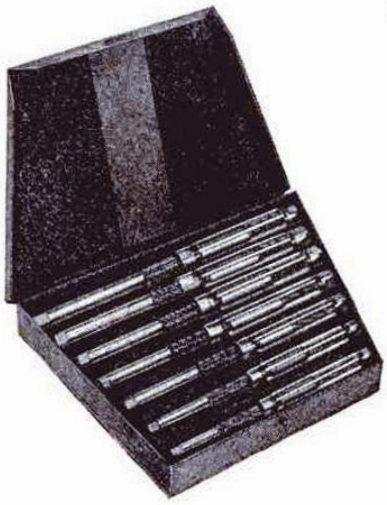
Solid Type Aligning Reamers for Electric Motors



These solid type Aligning Reamers all have 6 spiral flutes with a pilot on the front end of the reamer to guide it accurately through the bushing.

Number	Size	Type	Length Overall	Covers	Prices
★25-L	1/4"	Solid	6 1/2"	Sewing Machine Motors, Fans, etc.	
★26-L	17/64"	Solid	7 1/2"	Apex, Royal, Ohio, Premier	
★27-L	.277"	Solid	7 1/2"	Bee Vac, Federal, Fedelco	
★28-L	9/32"	Solid	7 1/2"	Super Royal, Cadillac, Healthmore	
★29-LA	19/64"	Solid	7 1/2"	Western Elec., Sweeper Vac	
★29-L	5/16"	Solid	7 1/2"	Eureka, Regina, Cadillac	
★31-L	5/16"	Solid	11"	Gen. Electric Washing Machines	
★32-L	3/8"	Solid	11"	Gen. Electric Washing Machines	

Critchley Type Small Expansion Reamers



These small, precision, Critchley type expansion reamers are just the thing for small bushings, valve guides, etc. Carefully constructed, they are accurate to a split thousandth and cover diameters of 1/4" to 15/32" inclusive.... A set of these precision reamers will equip you to handle all those small jobs quickly and at a low investment.

No.	*Description*	*Price*
★A-7	Set of 7 Critchley Type Expansion Reamers Listed Below in Neat Metal Case	
★8-A	Size 1/4" to 9/32"	
★7-A	Size 9/32" to 5/16"	
★6-A	Size 5/16" to 11/32"	
★5-A	Size 11/32" to 3/8"	
★4-A	Size 3/8" to 13/32"	
★3-A	Size 13/32" to 7/16"	
★2-A	Size 7/16" to 15/32"	

Extension Shanks



To increase the depth at which these reamers may be used and to adapt them for valve guide work, a complete set of extension shanks is also available. These extensions thread over the end of the reamers as illustrated.

No.	*Description*	*Price*
385	Extension Shank for 8-A	
386	Extension Shank for 7-A	
387	Extension Shank for 6-A	
388	Extension Shank for 5-A	
389	Extension Shank for 4-A	
390	Extension Shank for 3-A	
391	Extension Shank for 2-A	

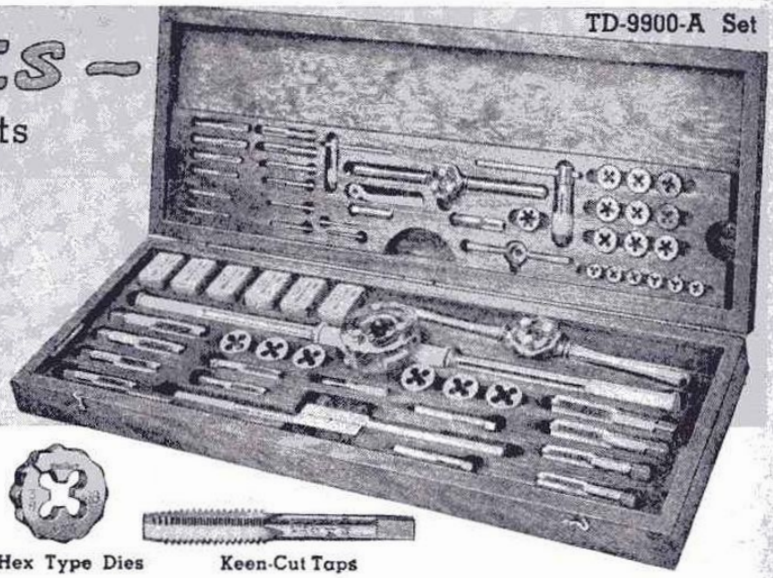
In TAPS and DIES —

It's the cutting edge that counts

Blue-Point

TAPS AND DIES

Assure clean cut threads



TD-9900-A Set

SURE! They look just like similar tools, but Blue-Point Taps and Dies give you more than appearance—they give you the finest and toughest thread cutting tools you ever bought.

Dies ¼" to ½" are one-piece, double hex type . . . a major convenience as they can be turned with a one inch socket wrench in close quarters where regular die stocks cannot be used. Machine screw dies 4-36 to 12-24 and dies ½" to ¾" are one-piece circular type. Both types are adjustable to give a tight or loose fit to your thread—a small adjusting screw changes the nominal die size from .001 to .003 under or over.

Dies over ⅝" are the 4-piece chaser type . . . these four cutting blades have the advantage over two-blade types, as they remove less material per blade and enable you to do an easier and cleaner thread cutting job.

The three largest die stocks are designed with a self-centering device that adjusts to the diameter of the rod or bolt, and insures a clean, accurate, straight thread . . . this centering feature also helps prevent dies from breaking due to tilting or cocking.

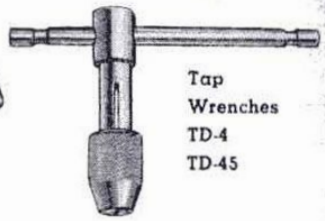
Hex Type Dies — Keen-Cut Taps



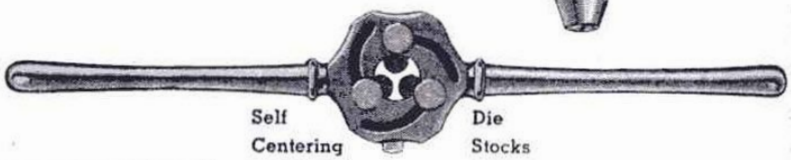
Round Type Dies



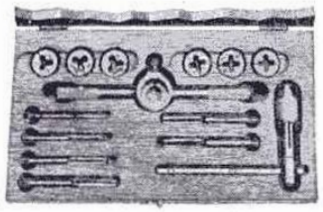
4-Piece Chaser Sets



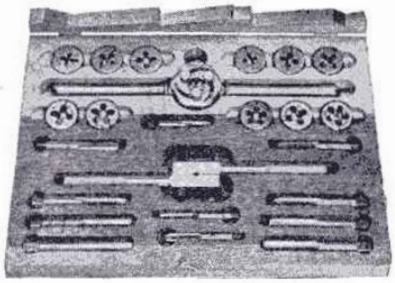
Tap Wrenches TD-4 TD-45



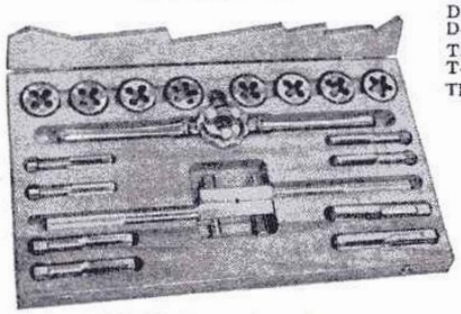
Self Centering Die Stocks



TD-2500-A Machine Set



TD-2400 Standard Set



TD-7800 Intermediate Set

Die Stocks and Tap Wrenches

TD-2 —Tap Wrench for Taps ⅛" to ½".....
TD-3-A—Die Stock for Dies 4-36 to 12-24.....
TD-4 —Tap Wrench for Taps 4-36 to 12-24.....
TD-10 —Self-centering Die stock for Dies ¼" through 7/16"...
TD-15 —Large Self-centering Die Stock for Chaser Dies.....
TD-20 —Large Tap Wrench for Taps ½" to 1".....
TD-35 —Die Stock for 1½" Round Dies.....
TD-45 —Tap Wrench for Taps ¾" Through ½".....

TD-9900-A Complete Set

Contains all of the handles listed above (except TD-2) and all taps and dies listed at right (except D-019, D-014, DR-037 and DR-032 Dies).

TD-9900-A SET, Complete in Sturdy Wood Case as Illustrated .....

TD-2500-A Machine Set

Includes six sizes of machine screw taps and dies, 4-36, 6-32, 8-32, 10-24, 10-32, and 12-24 listed at right. Also TD-4 Tap Wrench and TD-3-A Die Stock.

TD-2500-A SET, Complete in Wood Case as Shown.....

TD-2400 Standard Set

This popular set contains N.F. and N.C. sizes ¼" to ½", together with ⅛" pipe sizes. Handles included are the TD-2 Tap Wrench and TD-10 Self-centering Die Stock.

Dies—D-010, D-011, D-012, D-013, D-014, D-015, D-016, D-017, D-018, D-019, D-020.

Taps—T-100, T-101, T-102, T-103, T-104, T-105, T-106, T-107, T-108, T-109, T-110.

TD-2400 SET. Complete in Wood Case as Shown..

TD-7800 Intermediate Set

Contains the TD-35 Self-centering Die Stock and TD-20 Tap Wrench, together with eight 1½" outside diameter round dies and eight taps ½" to ¾" N.F. and N.C.

Dies — DR-014, DR-030, DR-031, DR-032, DR-019, DR-035, DR-036, DR-037.

Taps—T-104, T-120, T-121, T-122, T-109, T-125, T-126, T-127.

TD-7800 SET. Complete in Wood Case as Shown

★Because of their nature Taps and Dies cannot be guaranteed.

NATIONAL FINE SIZES

Size	TAP No.	TAP Price	DIE No.	DIE Price
¼–28	T-105		D-015	
5/16–24	T-106		D-016	
⅜–24	T-107		D-017	
7/16–20	T-108		D-018	
½–20	.....		D-019	
½–20	T-109		DR-019	
9/16–18	T-125		DR-035	
⅝–18	T-126		DR-036	
¾–16	.....		DR-037	
¾–16	T-127		DC-037	set
⅞–14	T-128		DC-038	set
1–14	T-129		DC-039	set

NATIONAL COARSE SIZES

¼–20	T-100		D-010	
5/16–18	T-101		D-011	
⅜–16	T-102		D-012	
7/16–14	T-103		D-013	
½–13	.....		D-014	
½–13	T-104		DR-014	
9/16–12	T-120		DR-030	
⅝–11	T-121		DR-031	
¾–10			DR-032	
¾–10	T-122		DC-032	set
⅞– 9	T-123		DC-033	set
1– 8	T-124		DC-034	set

MACHINE SCREW SIZES

4–36	T-111		DR-021
6–32	T-112		DR-022
8–32	T-113		DR-023
10–24	T-114		DR-024
10–32	T-115		DR-025
12–24	T-116		DR-026

PIPE SIZES

⅛"	T-110		D-020
¼"	T-130		D-040

MOTOR TUNE-UP SET

With these three tools any mechanic can quickly tell "what's" wrong with a motor, and "where" . . . can shorten tune-up time and turn out easy-starting, sweet-running jobs that will satisfy your customers and bring more business. And . . . each tool is a *dependable, precision instrument*—gauges are designed like watches, with bushed bearings and ultra-sensitive spring movements.

MT-14—Vacuum and Fuel Pump Gauge and Motor Analyzer—accurately detects a wide range of engine troubles from leaky manifolds to weak valve springs. The 3-color, 3½" dial tells at a glance the source of the trouble.

GREEN DIVISIONS: Normal motor and fuel pump divisions are outlined in green.

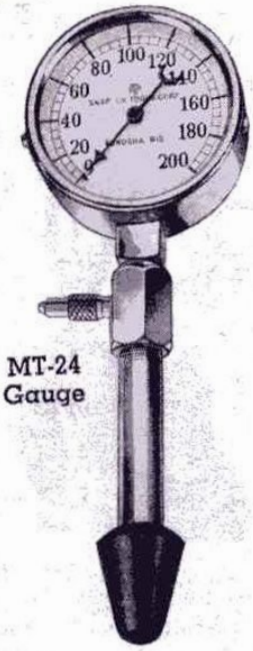
RED DIVISIONS: Faulty motor divisions are outlined in red. The red section is further subdivided into three divisions—"Leaky Manifold," "Heat Riser," and "Late Ignition or Carburetor Adjustment."

Other tests are explained in the center of the dial.

Adjustable restriction screw controls and minimizes the indicator vibrations, assuring exact readings. Four feet of hose are included with the tool.



MT-14 Gauge



MT-24 Gauge

MT-24—Compression Gauge—registers from zero to 200 pounds compression per square inch . . . *holds the highest compression reading exactly* until the release valve button is pressed. The gauge may thus be removed from the spark plug hole for easier reading. 2½" dial is calibrated into 5-pound divisions . . . cover is easily replaced if damaged. Cone adaptor is made of neoprene and is not affected by grease or gasoline . . . fits all spark plug holes.

TL-89—Timing Light—has lens construction that lights up timing marks with unusual sharpness . . . brilliant enough so that you can spot the timing marks exactly and turn out a perfect "tune-up" job every time . . . gives a wide range of brilliance for testing spark plugs. Sturdily built of plastic with red-lacquered cables . . . special hook is furnished to permit hanging and prevent damage to the cables.



TL-89 Timing Light

MT-30-B—MOTOR TUNE-UP SET. Consisting of five units listed below in No. 25-R Metal Case.

MT-24—Compression Gauge. Each.....

MT-14—Vacuum and Pressure Gauge. Each...

MT-12-10—⅛" Pipe Thread Adaptor for Vacuum Gauge Hose. Each.....

MT-12-12—½"x20 Thread Adaptor for Vacuum Gauge Hose. Each.....

★**TL-89—Timing Light.** Each.....



MT-30-B Set

TAP WRENCHES

Removable, 2-Piece Jaw Type

THE mechanic who wants high-grade tap wrenches will quickly recognize the superior features of these two tools. They are extremely well built, machined and fitted with great care, and are definitely high quality tools.

The removable, two-piece, parallel spring type chuck jaws are hardened and tempered to give lasting wear. True-cut, smooth-acting threads on the shaft and knurled compression head make tap-changing a fast, easy operation.

Sliding handles permit use of these tap wrenches in close places where a rigid handle cannot be turned, or where the additional leverage obtained by positioning the handle in an end position is an advantage on the job. A friction ball holds the sliding handle in center or either end position.

EH-40—TAP WRENCH. ¼" to ½".....

EH-50—TAP WRENCH. ⅛" to 7/32".....

Split Shank, 4-Jaw Type

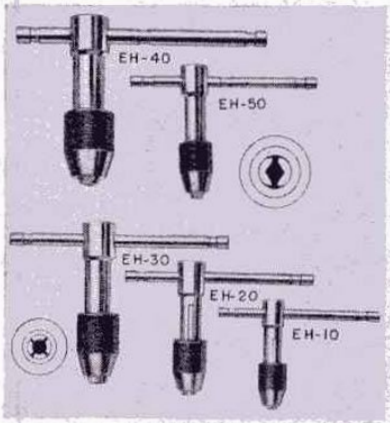
Well built, sturdy tools constructed to give satisfactory service over a long time to come. The blued finish, knurled compression head works freely on the threaded split chuck shaft for easy interchanging of taps . . . and the sliding tee handle adapts the wrench to work in extremely close places.

The shaft is split to form a four-jaw chuck, with the advantage of a round chuck opening, allowing you to use the wrench with reamers, drills, countersinks, etc., as well as taps. The three wrenches provide you with the means to handle all tap sizes up to ½" in diameter.

EH-10—TAP WRENCH. 6 x 32 to 10 x 24..

EH-20—TAP WRENCH. 7/32" to 5/16".....

EH-30—TAP WRENCH. ¼" to ½".....



All features considered, the EH-40 and EH-50 offer the very best tap wrenches available in this type and these sizes.

ARMATURE RECONDITIONING TOOL



After turning down the armature, the mica is undercut as shown above. This attachment is included as part of the AT-2 tool.

- **Handles both phases of the job . . .**
  Turns down armature—undercuts mica

Armature work offers your shop the opportunity for a good, steady profit—provided the cost of equipment is not out of proportion to your potential number of jobs . . . this too, meets your requirements . . . it requires no motor . . . simply lock it in a vise and you're all set to do a fast, accurate job.

Engineered from start to finish expressly for armature turning and undercutting, it is a well-designed, substantially built machine that turns out work comparable to that done on the most elaborate and expensive machinery—and is priced low enough to pay for itself and show a profit in a very short time.

The AT-2 handles armatures with $\frac{1}{2}$", $\frac{9}{16}$", $\frac{5}{8}$, and $\frac{11}{16}$" shafts . . . it does not require special centerless chucks . . . armatures can be turned down without removing the back plates . . . it is faster to use than an ordinary lathe.

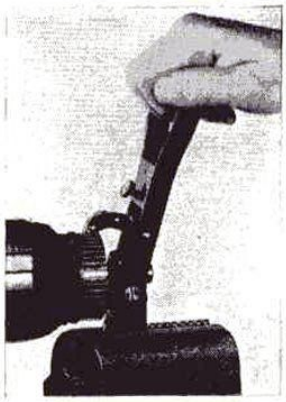
After the cut has been made, replace the cutter bar with the undercutting tool, being sure to use the right width saw blade. Finish undercutting, remove the saw holder, rotate, and touch up the commutator with fine sand paper, and the job is done.



The amount of the cut can be controlled down to the finest shaving. Lower handle raises the armature at proper starting position, and it lowers automatically as the cut is made. Complete instructions are included with each tool.

AT-2—ARMATURE RECONDITIONING TOOL. Complete with one double-end tool steel cutter blade and .015", .020", and .025" saw blades.....

★AT-2-16—Double-End Cutter Blade only. Each
★AT-2-35—.020" Mica Saw Blade only. Each.
★AT-2-35-A—.015" Mica Saw Blade only. Each
★AT-2-35-B—.025" Mica Saw Blade only. Each.



UC-4 Undercutter

Mica Undercutter Tools

Simply turning up the armature in a lathe is not sufficient to do a proper job—the mica between the segments must be undercut before the job is finished.

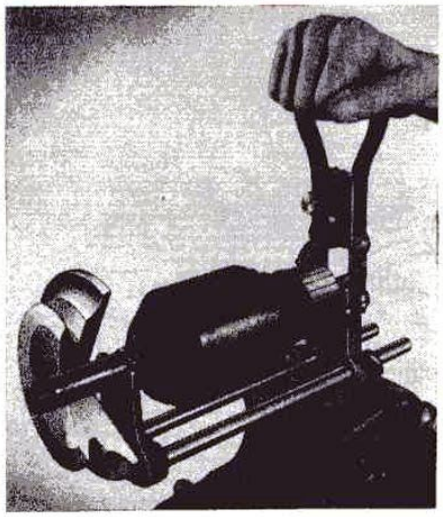
Here are just the tools for the job! Hand-operated mica undercutting tools, selling at low cost and capable of speedily turning out a finely finished armature undercutting job. They are light and portable . . . simply clamp them in a vise and attach the commutator.

UC-5 UNDERCUTTER has a special base assembly enabling you to handle armatures without removing the pulley or end bell . . . see picture. This tool is adjustable to handle commutators on which armature segments are not parallel to the shaft. Complete with UC-4-025-A .025" tapered blade.

UC-4 UNDERCUTTER has a simple base which grips the commutator shaft . . . it is necessary to remove pulleys or end bells when using this tool. Complete with UC-4-025-A .025" tapered blade.

UC-5BA BASE ASSEMBLY adapts your present UC-4 cutter so that it may be used without removing pulleys or end bells.

★UC-4-015—.015" Extra Blade.....
★UC-4-020—.020" Extra Blade.....
★UC-4-025—.025" Extra Blade.....
★UC-4-025-A—.025" Extra Blade (Tapered) .....
★UC-4-B—Set of 3 Blades; Includes UC-4-015, UC-4-020, UC-4-025 Blades.....



UC-5 Mica Undercutter

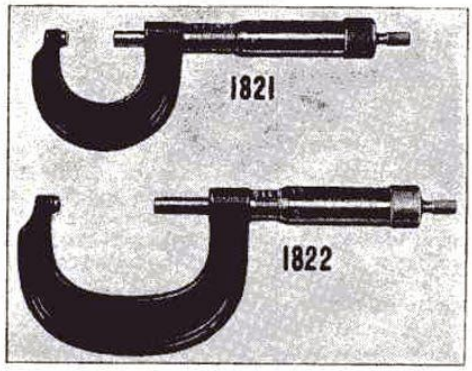
Micrometers

These dependable accurate Micrometers are standard prewar design and quality of a type especially practical for general type use. Extremely fine workmanship and dependable accuracy characterize these superior instruments.

The cut away frame at the anvil permits making measurements in slots, over shoulders, etc., and the frame is finished in lustrous black enamel.

Decimal equivalents are stamped very clearly on the polished steel thimble which is also furnished with a spinner tail.

Measurements on both models are made by 1/1000 inch, and both instruments have an adjustment to compensate for wear. In short, these are high grade instruments of extreme accuracy, and very reasonably priced.



No. 1821 0 to 1 inch. Each.....
No. 1822 1 to 2 inches. Each.....

METER-TYPE ARMATURE GROWLER

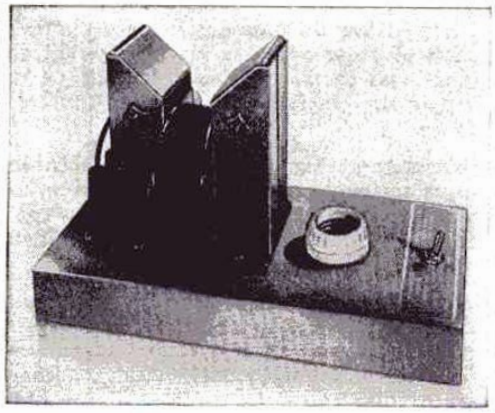


A meter type growler, such as the Snap-on AT-45 Armature Growler, is required to test many armatures used on modern generators, since some of these armatures cannot be tested by the "hack-saw" method due to the type of winding. A meter is used in conjunction with the growler to indicate a defective armature winding, such as poorly soldered connections, severed coils, transposed leads, nature of defect and its exact location in the armature, etc.

In addition to the "OFF and ON" line switch there is a "HIGH and LOW" switch. The "HIGH" position is used when testing generator armatures and the "LOW" position when testing starting motor armatures. Use only on 110 volt, A.C. 60 cycle. The test light is mounted in the base to prevent breakage and its light is observed through the side perforations.

When using growler simply place the armature in the "V" and turn the line switch to "ON" and the "HIGH-LOW" switch to proper position. Always shut off switch before removing the armature. The two testing points can be used when the unit is connected with the source of A.C. current while leaving the growler line switch in the "OFF" position.

Many service electricians use a growler simply to test for short circuits in armature windings. This meter type growler can and should be used to locate almost every kind of armature trouble. An instruction book thoroughly covering the subject and explaining test procedures for many specific armature defects is included with each AT-45 Growler.



AT-45 METER-TYPE ARMATURE GROWLER. Each.....

AT-12 Standard Armature Growler

Checking armatures for short circuits, open circuits and grounds is a **MUST** when reconditioning motors and generators, if satisfactory operation is to be the result. To do this job quickly yet accurately, an armature growler is an absolute necessity.

The AT-12 is a simple-to-use, compact growler complete with prods, test lamp socket and switch; all mounted on a metal base. Screw in an ordinary light bulb, connect the growler to an electric outlet, and you are all set to check and find the source of the armature trouble. Separate wiring for the test prods makes them independent of the switch allowing them to be used without the growler coil in operation.

Caution: Use only on 110 volt A.C. 60 cycle current . . . never have switch "On" unless "V" is bridged with an armature, as unbridged growler coils burn out quickly.

AT-12—ARMATURE GROWLER. Each.....

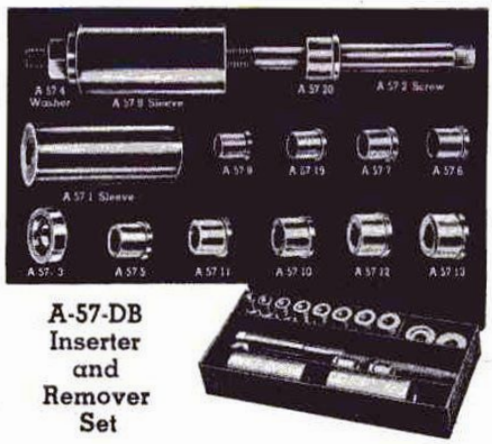
BUSHING INSERTER AND REMOVER SET

At last there is an easy way to remove those tight bushings, and here it is . . . this Snap-on tool will remove or insert all bronze or steel bushings with inside diameters of the sizes listed below and all outside diameters up to 1¼" and not exceeding 3" in length. This wide range of sizes covers practically all shackle and steering bushings . . . the tool does the job easily and quickly and prevents danger of damage when inserting new bushings.

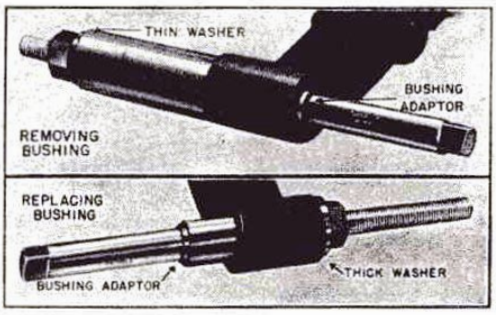
A-57-EB—BUSHING DRIVER SET. Complete in No. 20-B Metal Box....

A-57-DB—BUSHING INSERTER AND REMOVER SET. Complete in No. 20-B Metal Box .....

For Bronze or Steel Bushings



A-57-DB Inserter and Remover Set



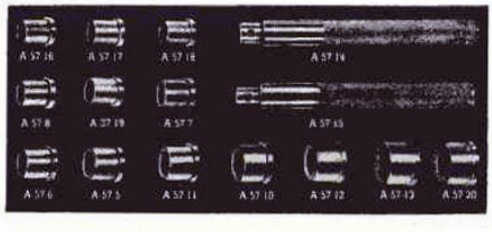
The top illustration shows how the A-57-DB Set is used to remove old bushings . . . tightening the hex nut pulls the adaptor and bushing through the shackle into the hollow sleeve.

Below shows the screw shaft and adaptor used to press a new bushing into position.

Parts Numbers

A-57-1—Sleeve (for bushings up to 1" diameter) .....
A-57-9—Sleeve (for bushings 1" to 1¼" diameter) .....
A-57-2—Screw Shaft.....
A-57-3—Thick Washer .....
A-57-4—Thin Washer.....
A-57-14—Large Driver .....
A-57-15—Small Driver.....

Stock No.	Adaptors for Bushings Inside Dia.		Outside Dia.	Price
A-57-5	47/64"	x	55/64"	
A-57-6	11/16"	x	13/16"	
A-57-7	5/8"	x	3/4"	
A-57-8	5/8"	x	5/8"	
A-57-10	51/64"	x	59/64"	
A-57-11	55/64"	x	63/64"	
A-57-12	15/16"	x	1 1/16"	
A-57-13	1"	x	1 1/8"	
A-57-16	13/32"	x	7/16"	
A-57-17	7/16"	x	1/2"	
A-57-18	1/2"	x	9/16"	
A-57-19	39/64"	x	43/64"	
A-57-20	1 1/16"	x	1 3/16"	
A-57-22	59/64"	x	1 3/64"	
A-57-23	1 1/16"	x	1 1/4"	
A-57-24	3/4"	x	1"	
No. 20-B	Metal Box			



A-57-EB Bushing Driver Set

For Twenty-five Years the Standard of Highest Quality

Spring Tester

BLUE-POINT SPRING TESTER

The Blue-Point Spring Tester is a compact, simple and very accurately constructed tool designed to be used with a standard half-inch drive torque wrench such as the Snap-on Torqometer. With this combination of Tester and Torqometer it is possible to measure or test the recoil pressure of coiled springs when compressed to any desired length . . . in other words, to test the performance of a spring at its normal working compression.

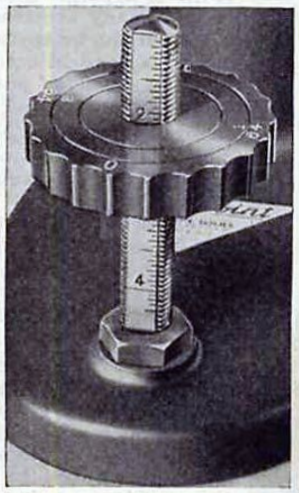
Not only does this tool provide a fast and exact means of testing coil springs up to 7" in length and 2½" in diameter, but it also enables you to match sets of springs such as Valve Springs, Clutch Springs, etc., for greater operating efficiency . . . and to do it quickly and accurately.

Compression Springs are usually simple, inexpensive parts of other complex machinery, but as motivating, functional parts, any fault in their performance will impair the efficient operation of the complete mechanism.

Improper spring pressures, or inaccurately matched valve springs, cause noisy valve action, excessive gasoline consumption, reduced engine speeds, loss of power and materially reduce the efficiency of the whole engine.

We recommend this Tester as a practical tool not only in auto service shops, but also in testing laboratories, aviation maintenance hangars, heat treating, inspection, and assembly departments . . . wherever springs are handled or used.

VT-15-A—SPRING TESTER. Each.....



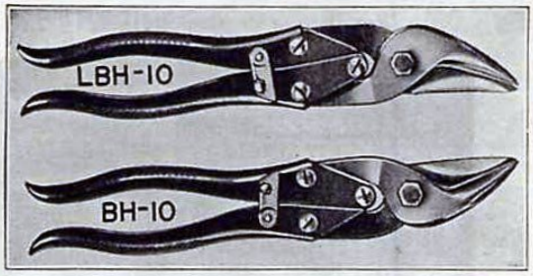
Each complete turn of the test platform on the threaded column changes its position 1/16". The surface of the platform is marked off in four equal settings to provide height adjustments in 64th of an inch, while the periphery ridges permit adjustment of test lengths to .003"



To assure accurate results use a Snap-on Torqometer with this spring tester . . . complete instructions and valve and clutch spring tension listings are packed with each tester.

- The compressing tongue is designed to compress a spring against a rigid platform . . . the axis of this tongue is designed to accept the ½" drive square of any accurate torque wrench, and the pressure applied to the spring is read directly on the torque wrench dial. A finely adjusted and permanently set tone device operates at the exact moment the spring is compressed to the correct length for which the adjustable platform has been pre-set.

Metal Cutting Shears



Designed primarily for the cutting of duralumin, stainless steel, and other tough metals, these metal cutting shears are extremely useful in aircraft production plants, automotive shops, tinner and plumber shops where high grade cutting tools are needed. The relief of the jaws allows the sheet metal to clear easier after the cut, and the edges of the jaws are serrated to give a non-slip cutting grip on the metal. The compound lever principle is used to exert tremendous cutting power, and the tools are made in both right and left hand cutting patterns. Blades are not guaranteed.

★**LBH-10—LEFT HAND METAL SHEARS.** Each.....

★**BH-10—RIGHT HAND METAL SHEARS.** Each.....

Tinners' Snips



Different gauge materials require snips of varied capacities, and the two listed here will handle a wide variety of jobs. These tools are hammer forged from high quality alloy steel with special cutting edges accurately ground. They will cut in either right or left hand direction and will be ideal for all round use for metal workers who need large capacity snips.

★**NO. 83—7" TINNERS SNIPS.** Pair.....

★**NO. 79—12" TINNERS SNIPS.** Pair.....



Spark Plug Tap Set

When removing spark plugs in aluminum heads it is often found that threads in the head have become damaged. This weakening is caused by electrolytic action . . . a current is generated which carries particles of aluminum from the head and deposits them on the plug which, of course, is iron. To repair these damaged threads, we offer this set of metric spark plug taps . . . the following sizes are included—10 mm., 14 mm., 18 mm., and ⅞" x 18.

If the threads are badly stripped it may be necessary to rebore the hole with the counterboring tool and rethread for the next size spark plug. This tool will do a much better job than can be done with a drill, and it reams out to the exact size required . . . no danger of getting the hole too big. The MCB-3 Counterbore will ream a 10 mm. hole to a 14 mm., a 14 mm. to 18 mm., and an 18 mm. to a ⅞". All sizes are on the one tool, and it can be used either by hand with a wrench or in an electric drill.

TDM-13—SPARK PLUG SET. Four Spark Plug Taps and Counterbore complete in box as illustrated .....

TDM-11—Set of Four Spark Plug Taps. Complete in box.....

T-10100—10 mm. x 1.00 Tap. Each.....

T-14125—14 mm. x 1.25 Tap. Each.....

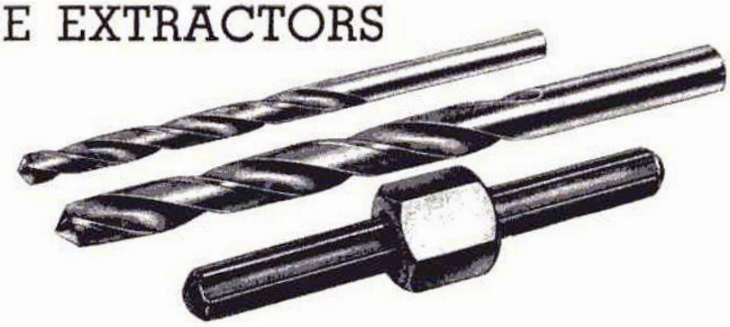
T-18150—18 mm. x 1.50 Tap. Each.....

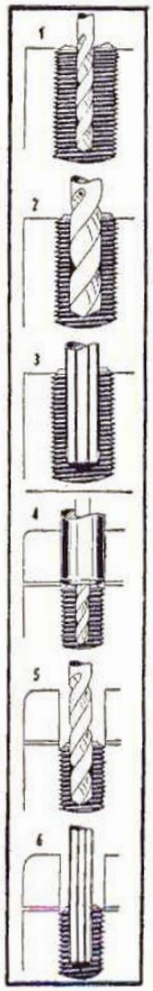
T-2818—⅞" x 18 N. F. Each.....

MCB-3—Counterbore. Each.....

SCREW AND PIPE EXTRACTORS







NEW, efficient tools for removing broken threaded ends of screws, studs, pipe, pipe plugs, fittings, etc. These new tools are not tapered but are **Straight** from end to end . . . when driven into a drilled hole in the broken stud, they grip without reaming or slipping, and, furthermore, *will not expand or distort sidewalls of holes* no matter how thin or how far the tool is driven in. Tightly embedded broken threaded ends can now be drilled out to thin walled shells, safely seized with one of these tools and easily turned out. This is the only basically correct method of doing the job . . . tapered types of extractors will often expand the broken unit making it bind tighter than before, and sometimes damaging the parts in which it is embedded.

NO. 1020 SCREW EXTRACTOR SET

Complete in No. 1020-B special metal box as illustrated. Contains one each of all the Drill Guides, Extractors and Special Drills listed below. Each Screw Extractor is equipped with a special turning nut having an outer hexagon shape to accept socket, boxocket or end wrench. Maximum depth at which extractions can be made with this set is 1".

No. 1020—SCREW EXTRACTOR SET. Complete . . .

No. 1020-B—Metal Box only. Each . . . . . .

3-Steps in Extracting

1. A small hole is first drilled in the broken screw (Fig. 1); if the screw is broken below the surface, the correct size guide is used to center the drill (Fig. 4).
2. The hole is enlarged to proper size to accept the extractor tool (Fig. 2 and Fig. 5) . . . correct drill sizes are shown under "Extractors."
3. The drill is removed and the extractor is driven into the drill hole (Figures 3 and 6) and the broken end quickly turned out.

Drill Guides

Used for centering drills at a depth not exceeding one inch.

No.	Each	O. D. Diam.	I. D. Diam.	Overall Length	Use Drill
921		9/32"	1/8"	1 3/16"	1/8"
1021		5/16"	1/8"	1 3/16"	1/8"
1121		11/32"	1/8"	1 3/16"	1/8"
1221		3/8"	1/8"	1 3/16"	1/8"
1321		13/32"	5/16"	1 3/16"	5/16"
1421		7/16"	5/16"	1 3/16"	5/16"
1521		15/32"	5/16"	1 3/16"	5/16"
1621		1/2"	5/16"	1 3/16"	5/16"
1721		17/32"	1/4"	1 3/16"	1/4"
1821		9/16"	1/4"	1 3/16"	1/4"

Screw Extractors—Complete with Hex. Nut

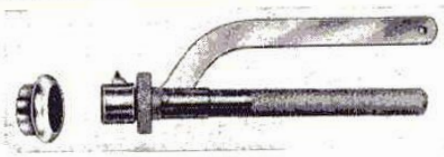
No.	Each	Screw Diam.	Use Drill	Flute Diam. O. D.	Length O. A.
1		1/4"	1/8"	.139	2 5/16"
2		9/16"	5/16"	.205	2 3/4"
3		3/8"	1/4"	.272	3 1/16"
4		7/16"	5/16"	.338	3 5/16"
5		1/2-9/16"	11/32"	.374	3 3/4"

Special Drills

No.	Each	Diam.	Length Overall	Type Shank
1		1/8"	2 1/2"	S. S.
2		3/16"	3"	S. S.
3		1/4"	3 1/2"	S. S.
4		5/16"	4"	S. S.
5		11/32"	4 1/2"	S. S.

When ordering individual Extractors or Special Drills please state which tool is required by description as well as by tool number.

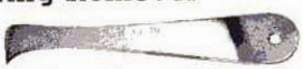
Door Handle Ferrule Tool



Snap-on's Door Handle Ferrule Tool attaches door handle ferrules *RIGIDLY*. Adjustable for all General Motors Cars and Trucks, all years, all models, both wood and steel construction. Special adjusting nut permits tight installation of ferrule on repaired door panels and rear deck lids that have been built up unevenly by welding or with body solder.

No. 115—DOOR HANDLE FERRULE TOOL. Each . . . . .

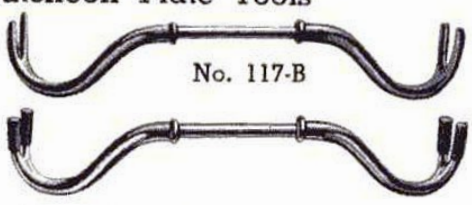
Door Handle Spring Remover



This handy little tool is used with the No. 117-B and No. 116 Escutcheon Plate Tools and is designed for removing the spring lock on door and window regulators on Fisher bodies. It's no trick at all to get these springs out with this tool.

★**No. 119—SPRING REMOVER.** Each . . . . . .

Escutcheon Plate Tools



These tools are used to depress the escutcheon plates on automobile door and window regulator handles, permitting easy access to the retaining pin or ring which holds the handle in place. The forked end is placed around the handle and on the plate and pressure applied with the body—leaving both hands free to remove the pin or ring. The ends are a different size to handle large and small plates. The No. 116 is especially designed to take the plastic type escutcheon plates on late models cars and has rubber-covered jaws as a protection for these plates.

★**No. 117-B—ESCUTCHEON PLATE TOOL.** Each . . . . . .

★**No. 116—ESCUTCHEON PLATE TOOL.** Each . . . . . .

Piston Ring Compressors

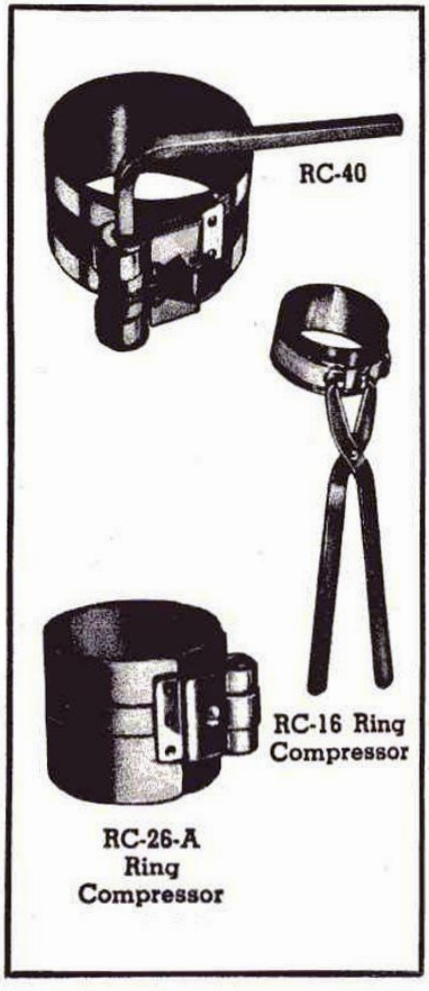
Ratcheting Ring Compressors

The ratchet control on this new piston ring compressor holds the tension bands in position with no danger of slipping as the piston is inserted into the cylinder, and "V" beads on the lower edge of the main belt keep the tool from entering the cylinder. The two outer tension bands of ½" wide fine spring steel synchronize the tension over the entire width of the belt, so that the entire ring assembly, no matter how stiff, may be gently and firmly compressed into the grooves until flush.

A slight pressure on the ratchet trip opens the compressor, and it slides off the piston fully open, ready for the next job.

This is the finest piston ring compressor we have ever seen and unhesitatingly recommend it . . . it's simple to operate and does a fast, efficient job every time. The automatic release and self opening feature alone make this a standout in piston ring compressors—It's a quality tool throughout.

RC-40—RING COMPRESSOR. 2⅛" to 5" capacity. Each.....
RC-50—RING COMPRESSOR. 3½" to 7" capacity. Each.....



RC-26-A Ring Compressor

Here's a sturdy, well-built tool that will handle all passenger car sizes and that for quality and ease of operation cannot be beaten at anywhere near its low price.

This tool is furnished with the same type handle as the RC-40 illustrated at right and which provides plenty of leverage for pulling the tightest rings snugly into place in the ring groove.

It is very simple to use and can be used from below on all car models . . . the tension band is made from finest clock spring steel, insuring long life and perfect shape.

If you are looking for a low priced piston ring compressor that will do a really efficient job . . . here's the tool you need.

RC-26-A—PISTON RING COMPRESSOR. Each .....
★No. 201—Extra Compression Band. .....
★No. 202—Extra Tension Band..

RC-16 Ring Compressor

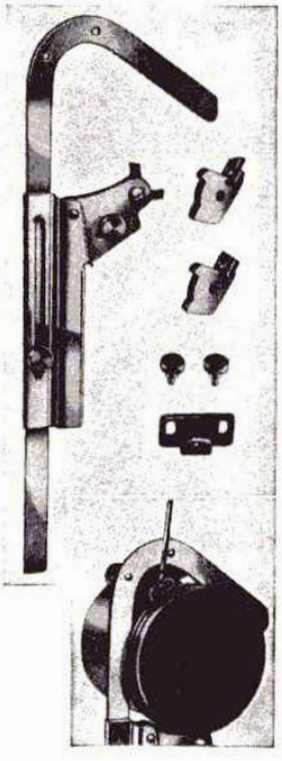
This is an excellent tool at low cost. It has only one compressing band and is truly universal, taking all sizes from 2⅝" up to and including 4". Ten adjustments are provided on this one band, and a new feature of the tool is a sliding locking clamp which locks the compressed tool at any desired position. Handles are not fastened to the band but grip onto two gripping shoulders when necessary and are removed after the band is locked, simply by releasing the hand grip.

The band is made of finest Clock Spring Steel, insuring long life and perfect shape.

RC-16—PISTON RING COMPRESSOR. Each .....

Extra Bands Not Included with RC-16.

★RC-16-B—Truck Band 4"-5½"...
★RC-16-C—Tractor Band 5½"-7".



Piston Reconditioning Tools

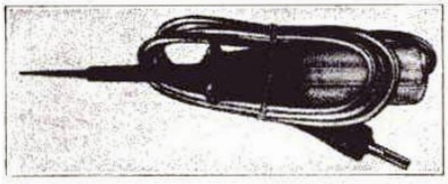
Piston Reconditioning Kit RC-37-K

If you're doing ring jobs, this tool will save you a lot of time. It's a ring groove cleaner built to take all cylinders up to 6" diameter and complete with cutter blades to fit 3/32" to 5/16" grooves—but it also has a chamfering attachment for cutting a 45° chamfer on the bottom edge of the oil ring groove . . . a drilling jig for piloting a 3/32" drill so that an oil relief hole can be drilled at the proper spot and at exactly the right angle . . . and a ring land reducer that is used to bring back the swelled lands on aluminum pistons to their proper size.

The chamferer and land reducer are used on the tool in place of the regular cutter wheel . . . the drill jig is mounted on the curve of the arm as illustrated below. Get your set NOW and be prepared for easy work on your next ring job. Uniform tension and non-chatter cutting action is maintained by the compensating spring on the tilting cutter arm.

RC-37-K—PISTON RECONDITIONING KIT. Complete with all parts.....
RC-37-A—Cutter Wheel Only. 3/32", 1/8", 5/32" and 3/16" blades. Each.....
RC-37-D—Drill Jig Only. Each.....
RC-37-E—Land Cutter & Holder Only. Each .....
RC-37-F—Chamfer Cutter & Holder Only. Each .....
RC-37—Ring Groove Cleaner with RC-37-A only. Each .....

Electric Tester



Spot those troublesome breaks and shorts in a jiffy with this electric tester.

Complete in itself, simple and easy to use, it requires no technical training to operate.

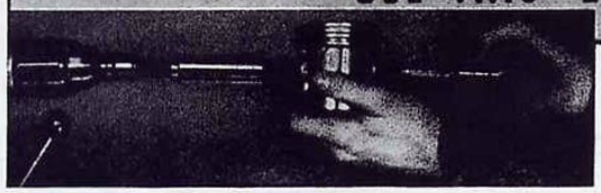
The tester consists of a needle-pointed prod with a plastic handle and a four-foot length of wire with a spring clip attached to the end. The clip is attached anywhere on the car and the point of the tester brought in contact with the wire, switch, etc. When a live circuit is closed, a bulb in the handle of the tester lights up. This makes it easy to trace down the cause of the trouble, whether it be shorts or breaks in single wires or electrical circuits, fuses, bulbs, switches, ignition timing, etc. Not guaranteed.

GA-41—Electric Tester. Each.....



FOR A BETTER WAY TO FIT PISTON PINS AND ALL SMALL BEARINGS

USE THIS TYDEMAN HONE







IT not only enlarges holes—*it trues them also,* and it works in all metals . . . hardened steel, cast iron, brass, aluminum, bakelite, glass, plastics, or any other material that can be ground.

You can drive it with a regular ½" drill—it's not a one-purpose tool . . . or you can turn it by hand. It is portable and can be used anywhere—down under a car if necessary.

It has *more grinding surface* than other similar tools—full 8" of length on the large size blades—**hones two bearing surfaces** truly in line as shown below . . . and it uses the economical, easy-to-replace grinding sheets. The cost of these sheets is less than that of sharpening reamers. It will fit all piston pins and grind all spindle bolts on cars and trucks . . . fit shackle bolts, knee action bushings, brake cylinders . . . in fact about 95 per cent of all automotive pin or bushing fittings.

Blades ride full length on the tapered body—top surfaces of blades are *always parallel at any expansion* . . . cannot bow at any point. Space between abrasives permits cuttings to fall and avoids piling up on abrasives. The four smallest blades are reinforced at one end for added strength, and economical shorter abrasives are used.



Micrometer Adjustment and Speed Sleeve

There's no need to overcut with this tool . . . the Micrometer Stop is adjustable to .00025", enabling you to hone to exactly the correct degree . . . simply pre-set the micrometer, and expansion is stopped at that setting.

The Speed Sleeve automatically expands the blades as fast as the metal cuts away —without further adjustments . . . you can remove as much as 1/64" about as fast as you could ream it—and do a precision finished job.

Universal Joint

There's no "flipperty-flop" when you let go of the speed sleeve to "try the fit"—because the unique, four-point driven universal joint at the drive end of the tool is free-rolling . . . the tool spins with scarcely a waver without holding the end. This universal joint rolls freely at better than 600 R.P.M.

No. TH-10 Tydeman Hone and Parts

TH-10—TYDEMAN HONE. Complete with 10 sets of blades and one pair of abrasives for each set of blades in No. 10-TY Metal Box.
TH-10-1—Body with any one set of blades.

Blades			Abrasives Fine	Abrasives Coarse
10-2-A	1 1/16" to ¾"	Uses	★10-3A22	★10-3B22
10-2-B	¾" to 13/16"	"	★10-3A24	★10-3B24
10-2-C	13/16" to ⅞"	"	★10-3A26	★10-3B26
10-2-D	⅞" to 15/16"	"	★10-3A28	★10-3B28
10-2-E	15/16" to 1"	"	★10-3A30	★10-3B30
10-2-F	1" to 1 1/16"	"	★10-3A30	★10-3B30
10-2-G	1 1/16" to 1⅛"	"	★10-3A30	★10-3B30
10-2-H	1⅛" to 1 3/16"	"	★10-3A30	★10-3B30
10-2-J	1 3/16" to 1¼"	"	★10-3A30	★10-3B30
10-2-K	1¼" to 1 5/16"	"	★10-3A30	★10-3B30

Abrasive sheets available in dozen lots in any one size.
10-3A—Package of 24 assorted sheets of fine abrasives.
10-3B—Package of 24 assorted sheets of coarse abrasives.

Special Blades and Abrasives

Blades			Abrasives Fine	Abrasives Coarse
10-2-M	1 5/16"	"	★10-3A30	★10-3B30
10-2-N	1⅜"	"	★10-3A30	★10-3B30
10-2-Q	1 7/16"	"	★10-3A30	★10-3B30

Order blade sets and abrasives by above stock numbers.

TH-6 Tydeman Hone (Short Blade Type)

This unit is designed exactly the same as the large unit illustrated, except that it is shorter and its blade length is 5¾". Complete range of this tool is .703" to 1 5/16", and the blade sizes to cover a range of .735" to 1⅛" are included in the standard set. It's an ideal tool for fitting piston pins, small bearings, and bushings where longer hone length is not needed.

TH-6 Unit and Parts

TH-6 UNIT—Consists of TH-6 Body with following sets of blades and 7 sets of grinding sheets. Complete in case.
TH-6-2A—.735" to 13/16"
TH-6-2B—13/16" to ⅞"
TH-6-2C—⅞" to 15/16"
TH-6-2D—15/16" to 1"
TH-6-2E—1" to 1 1/16"
TH-6-2F—1 1/16" to 1⅛"

TH-6-1 Body—With any one set of blades.
Any set of TH-6-2 Blades, per set.

Abrasives
★NO. 1-3A—.703" to 1¼" fine. Package of 24 sheets.
★NO. 1-3B—.703" to 1⅛" coarse. Package of 24 sheets.

Additional Sets of Blades and Abrasives for TH-6 Body

TH-6-2S—Set of small blades .703" to .750".
TH-6-2G—Set of oversize blades 1⅛" to 1 3/16"
TH-6-2H—Set of oversize blades 1 3/16" to 1¼".
TH-6-2J—Set of oversize blades 1¼" to 1 5/16".

Note: The oversize blades for TH-6 Body require the 1-4A and 1-4B Abrasives.

★NO. 1-4A—1⅛" to 1 5/16" fine. Package of 24 sheets.
★NO. 1-4B—1⅛" to 1 5/16" coarse. Package of 24 sheets.

For Twenty-five Years the Standard of Highest Quality

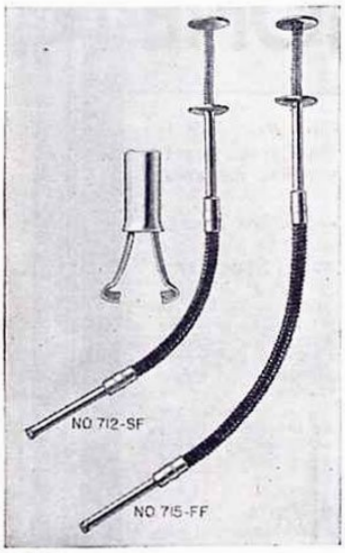
Flexible "GRIP-IT" Tools

Mechanical Fingers That Always Hold Tight

THESE extremely useful tools literally pick up where you leave off . . . where working space is extremely limited their many uses make them *more helpful than an extra hand.* In the production of a great many assembled products there are numerous hard-to-get-at spots, too small to insert the hand, where this tool can be used to insert small parts or start nuts, screws, bolts, etc. "GRIP-ITS" add considerable distance to the user's reach, and the gripping power of the jaws is really surprising. They can easily pick up pliers, wrenches, and other tools, or parts that may have slipped out of place.

The plunger actuates two spring-steel jaws which can be opened slightly more than one inch . . . ends of the jaws are flat with a centered notch enabling them to grip any objects securely.

These flexible and semi-flexible tools are constructed with a flexible steel wire working inside the flexible casing. Jaws are easily replaced in case of breakage. The flat end button is unscrewed allowing the center shaft to be slid thru the casing far enough to allow detaching the broken jaws, and insertion of new ones.



712-SF Semi-Flexible Type —12" long, with a 5" flexible section, allowing the tool to be bent and used at a 90 degree angle. Each

715-FF Fully-Flexible Type —15" long with an 8" flexible section. This tool can be bent into many shapes such as a double "S" or at a double right angle and still retain full operation of the jaws. Each.....

"See-Eee-Zee" Mirrorview

There are numerous occasions in present-day assembly operations, machine-shop work, service, and maintenance, etc., where it is necessary to inspect work from behind, or where obstructions block the view and the only means of seeing the work is with an adjustment inspection mirror.

The Blue-Point "See-Eee-Zee" Mirrorview is "just what the doctor ordered" for work of this kind. With it you can look at work which is otherwise inaccessible to your view.

A most useful feature is the convenient locking device, operated by one hand, by means of which the mirror can be locked at any position within a 90° arc after the mirror has been inserted past obstructions. To our knowledge no other inspection mirror has this extremely convenient feature.

These tools are constructed of tubing, rod, and sheet metal, zinc plated, and work freely and easily.

Mirrors are good quality glass and are free from distortion.

Mirror is set at desired angle after tool is inserted past obstructions. Locking device holds mirror at any position within a 90° arc.

Mirror returns to a straight position automatically when lock is released. One hand holds and operates mirror, leaving the other free to make inspections, adjustments, etc.

★GA-51—LARGE MIRRORVIEW. 17¾" long. Ea...
★GA-51-1—Extra Mirrors for above 1¾" x 2¾". Ea.
★GA-52—SMALL MIRRORVIEW. 10" long. Ea....
★GA-52-1—Extra Mirror for above 1¼" x 1⁷⁄₁₆". Ea.

Steel Tape Rules

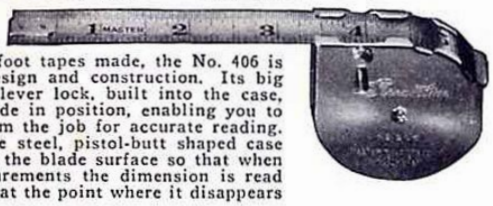
Precision-Built for Professional Craftsmen

WE believe these rules to be the *finest available anywhere.* They are built by an exclusive tape and rule manufacturing organization whose 30 years of manufacturing experience and reputation for quality products assures the finest steel tape rule money can buy. Each of the styles offered has its own particular claim to quality and appeal dependent upon the requirements of the buyer and price range of the tool.

Each Rule Illustrated Has These Important Features

1. Blades withstand exceptionally hard wear and should outlast ordinary rule blades. Of course, a sharp fold or bend will leave a kink in any blade, but in regular use the superior quality of the tempered steel blades will be evident. First 6" is engraved in 32nds, the rest of the blade in 16ths. Each blade has several inches engraved past the six foot measure — a big convenience on many jobs.
2. A wind-up spring aids in retraction of the blade. It has just enough tension so that a very slight pressure on the blade holds it extended to any position. When the pressure is released, the blade is returned to the case with a minimum amount of "push."
3. An important feature found in all models of the line is the fact that the blades are replaceable with very little trouble. The only tool required is a small screw driver.
4. Cases can be taken apart and cleaned when necessary. A rule of this kind eventually gathers foreign matter that impedes its easy and efficient operation. Each of these rule cases can be taken apart and cleaned in a few minutes' time.

No. 406 ⟹



One of the finest 6-foot tapes made, the No. 406 is the last word in design and construction. Its big feature is the cam lever lock, built into the case, which locks the blade in position, enabling you to remove the tape from the job for accurate reading. The open top of the steel, pistol-butt shaped case reveals a portion of the blade surface so that when taking inside measurements the dimension is read directly on the tape at the point where it disappears into the case.

The high quality tempered steel blade is etched on both sides, allowing a wide variety of applications.

★No. 406—6′ STEEL TAPE RULE. Each.....

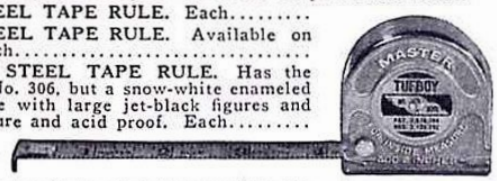
Built to meet the demand for a medium priced, inside measuring tape . . . rugged and sturdy and a favorite with men who wear out ordinary rules. The unbreakable die-cast zinc alloy case is exactly 2" wide so that for inside measurements you simply add two inches to the dimension shown on the tape. Figures are permanently etched on the tempered steel blade.

★No. 306—6′ STEEL TAPE RULE. Each.....

★No. 308—8′ STEEL TAPE RULE. Available on special order. Each.....

★No. 306-W—6′ STEEL TAPE RULE. Has the same case as the No. 306, but a snow-white enameled finish on the blade with large jet-black figures and gradations. Moisture and acid proof. Each.....

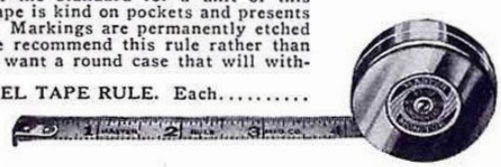
No. 306 ⟹



Housed in a flat surfaced, round steel case, this rule has become almost the standard for a unit of this type. Its round shape is kind on pockets and presents a nice appearance. Markings are permanently etched into the steel. We recommend this rule rather than the No. 116 if you want a round case that will withstand hard use.

★No. 206—6′ STEEL TAPE RULE. Each.....

No. 206 ⟹



A favorite with engineers, draftsmen and others who use a steel tape at office or home. Case is of beautiful light brown Tenite with flat surface and rounded edges. Blade is the same high quality as in the No. 206. As the case is not unbreakable we do not recommend it for general shop use.

★No. 116—6′ STEEL TAPE RULE. Each.....

No. 116 ⟹



Push-Pull Steel Tape

This six-foot rigid-flex steel tape of the push-pull type, while of excellent quality for its price, does not have the wind-up spring or disassembly features of the rules shown above. Extra wide blade is exactly 6 feet long and can be pulled completely out of its case for end to end measurements. Has customary blade end hook and first 6 inches is graduated in 32nds . . . remainder in 16ths.

★ABN-6—6′ STEEL TAPE RULE. Each.....

6" Steel Rule

★GA-2—This 6" steel rule is stiff tempered, ¾" wide and .135" thick with graduations of 32nds on one edge and 64ths on the other. The ground edges make it adaptable for use as a straight edge. Decimal equivalents by 64ths ranging to 1" are found on the reverse side. Each.....

HYDRAULIC BRAKE CYLINDER HONE

OPEN up *new profits* for your shop . . . Keep this work in your shop where it belongs. Prevent out-of-round cylinders spoiling an otherwise perfect brake servicing job.
Each body has two sets of three slots—one milled shallow, the other milled 1/32" deeper.

One set of blades expands 1/16" in each set of slots, or moving the blades from one set of slots to the other produces 1/8" expansion without any other adjustment. Using the three sets of blades in this manner gives 3/8" expansion in each body so that the complete set with three bodies has a total range of from 3/4" to 1 7/8", which covers practically all cars and trucks.

Complete Brake Cylinder Hone Set

No. 925—HYDRAULIC BRAKE CYLINDER HONE SET—range 3/4" to 1 7/8". Contains four bodies, three sets of 3 blades—small, medium, and large—with abrasives mounted, eighteen extra abrasives—9 coarse and 9 fine, and one flexible driving shaft adaptable to 1/4" or 1/2" electric drill . . . put up in neat metal box.....





The abrasives are all interchangeable with each size blade, and the blades are all interchangeable with each size body, thus eliminating the necessity of a large assortment of abrasives. The abrasive cloth is a special type for this work and is mounted on a metal back, making it very rigid and practical for long service.

Individual Sets

876—Contains two hone bodies, 876-B-S small size 3/4" to 15/16", and 876-B-D large size 15/16" to 1 1/8" capacity. Each is complete with nut, collar, and cup screw so that it is not necessary to waste time changing these parts from one body to the other. Included in this set are nine blades, three each of the small, medium, and large sizes, which are interchangeable on both bodies together with nine coarse abrasives and three fine abrasives—WITHOUT FLEXIBLE DRIVING SHAFT—put up in cardboard box .....

877—Contains one 1 1/8" to 1 1/2" complete hone with three sets of 3 blades—small, medium, and large; nine coarse abrasives and three fine abrasives, and one special 1" size cup screw for step bore cylinders—WITHOUT FLEXIBLE DRIVING SHAFT . . . put up in cardboard box..

878—Contains one 1 1/2" to 1 7/8" complete hone with three sets of 3 blades—small, medium, and large; nine coarse abrasives and three fine abrasives—WITHOUT FLEXIBLE DRIVING SHAFT . . . put up in cardboard box..

Large Individual Hones (For Trucks)

879—Contains one 1 7/8" to 2 1/4" complete hone with three sets of 5 blades, fifteen coarse abrasives and five fine abrasives—WITHOUT FLEXIBLE DRIVING SHAFT . . . put up in cardboard box.....

880—Contains one 2 1/4" to 2 5/8" complete hone with three sets of 5 blades, fifteen coarse abrasives and five fine abrasives—WITHOUT FLEXIBLE DRIVING SHAFT . . . put up in cardboard box.....

920—FLEXIBLE DRIVING SHAFT adaptable to 1/4" or 1/2" electric drill .....

Abrasives

899-C—One dozen coarse abrasives . . . will fit all three sizes of sets of blades .....

899-F—One dozen fine abrasives . . . will fit all three sizes of sets of blades .....

Bodies

876-B-S—3/4" to 15/16" Hone Body with nut collar and cup screw.....
876-B-D—15/16" to 1 1/8" Hone Body.....
877-B—1 1/8" to 1 1/2" Hone Body.....
878-B—1 1/2" to 1 7/8" Hone Body.....

Hydraulic Brake Clamp

You'll save yourself a lot of trouble by using this little tool when working on hydraulic brakes. It holds the brake cylinder in closed position to prevent bleeding when the shoes are removed. Simply press the spring clip to open or close . . . handy . . . convenient . . . sure. Get this into your tool kit NOW.

★BL-40 HYDRAULIC BRAKE CLAMP. Set of four.....



BL-40 Brake Clamp

Brake Lining Clamp

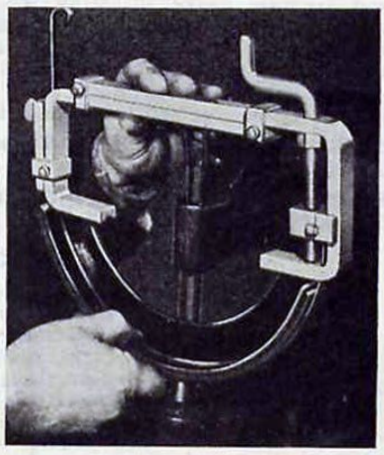
Here is one of the finest brake lining clamps we've ever seen . . . it speeds up the job of brake lining and provides assurance that the job will be properly riveted. This tool is applicable to any automobile brake shoe including steeldraulic . . . is easy to operate and holds the lining tight and smooth on the shoe while you drill, countersink, and rivet it on. Most chatters and squeaks as well as spongy brakes are caused by bad fitting of the brake lining . . . and you cannot do a good job without a tool that clamps the lining to shoe and holds it in place until the job is done. Save time and make more money for your shop with this excellent tool.

BL-30—BLUE POINT BRAKE LINING CLAMP, complete with long and short bands. .....

★BL-27—Extra Band (Short—for all passenger car jobs, except one piece shoes). Each .....

★BL-36—Extra Band (Long—for one piece or steeldraulic and truck shoes). Each .....

BL-31—Perch—Necessary on some types of riveting machines, needed on Ford brake shoes on models prior to 1935. Each.....



BL-30 Brake Lining Clamp

BRAKE SERVICE TOOLS

Brake Spring Tool

Designed for Bendix hydraulic brakes but works on most springs attached to a post and provides an unusually easy way to handle this job. The socket end is slipped over the post and turned so that the grooved lip engages in the spring loop . . . lifting the tool off the post removes the spring. The replacing end is simply a hook which is placed through the spring loop and rests around the post; the loop is then slipped down over the end of the hook on to the post.

BT-11—BRAKE SPRING TOOL. Each.....

Brake Pedal Jack

Holds brake pedal in position while brakes are being adjusted. The round base is placed against the heel board and the notched end against the brake pedal. Handle has ratchet action for working in close quarters and tool can be locked in any position. Can be used to hold oil pan in position while bolts are replaced. Minimum overall length 15¾", maximum extension overall 25".

BP-1—BRAKE PEDAL JACK. Each.....

Brake Shoe Spring Compressor

There's not much danger of skinning your knuckles when you use this little tool for removing the lock caps on brake shoe springs. You simply place the prongs over the cap—push it down—give it a twist—and off it comes . . . easily . . . safely.

CG-14—BRAKE SHOE SPRING COMPRESSOR. Each.....

Long Open End Brake Wrenches

Strong Open End wrenches with plenty of leverage to break loose those tight anchor pin nuts. Note the extreme length of these three tools. Stop fooling around with ordinary short handle Open Ends on these jobs and use Blue-Point long brake wrenches to make your work easier.

Stock No.	Length	Openings	Head Thickness	Price
B-1450	16"	15/16" & 1 1/16"	1/2"	
B-1451	16"	1" & 1 1/8"	1/2"	
B-1452	15 1/8"	3/4" & 7/8"	3/8"	

Special Bendix Brake Wrench

Especially designed to take the Eccentric Cam on Bendix Internal Brakes and gives two most needed sizes of openings, 9" long, ¼" head thickness. 3/16" and 5/16" openings.

B-1351—SPECIAL BENDIX BRAKE WRENCH. Each.....

Special Brake Adjusting Tools

These tools are real time savers for mechanics in brake service stations and garages. They are specially designed to clear such interfering parts as the frame fittings, shock absorbers, etc., by working through or around such obstructions.

The ends of the tools are bent to provide the best angles for reaching the star adjusting nut position, and the blades are tapered to give a clean contact with the work faces of the nut . . . just the right length and thickness to do a fast, easy and accurate brake adjusting job. Each of these tools will service Bendix and other brakes on a majority of cars, but the different blade bends give each tool an advantage on certain car models . . . add both to your kit and be ready for all work of this nature, they will soon pay for themselves in time saved and in working convenience. Both tools are drop forged from finest available steel and will give years of service. Tools are 9" long.

S-8353—BRAKE ADJUSTING TOOL. For all cars using star nut adjusting except Chevrolet. Each .....

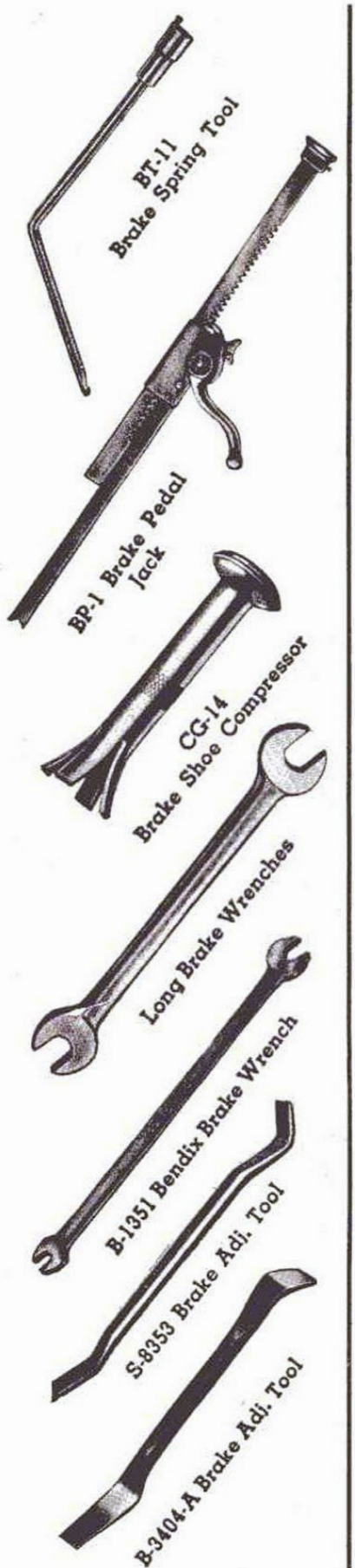
B-3404-A—BRAKE ADJUSTING TOOL. For all cars using star nut adjusting except Chevrolet. Each .....

Cadillac-LaSalle Connecting Rod Socket



A specially designed socket for servicing connecting rod bolts on Cadillac and LaSalle motors. These bolts which are drawn up extremely tight have an unusually small hex head and frequent socket breakage occurs when standard sockets are used on the job. This special 7/16" single broached socket has a long straight nose with a heavy wall construction to provide the necessary socket strength for servicing these bolts. Fits Master (½" square drive) Handles.

★**S-9702—CADILLAC CONNECTING ROD SOCKET.** Each



SPECIAL FORD TOOLS

SPRING SPREADER FOR FORD CARS & TRUCKS

Patent Number 2,212,090

Power Enough to Spread the Stiffest Springs With Ease

A FULL seven tons of *smooth, friction-free power . . . effortless operation* . . . no binding on the stiffest jobs. Any mechanic can change springs quicker with this tool—light and easy to handle, it's just about the fastest and simplest tool ever developed for the job. Sturdy, seamless tubing of new alloy steel provides the utmost strength and safety.

Parts are easily and quickly interchanged to adapt the tool to various models . . . *one man* can have it ready and on the job in only a few seconds . . . have the job finished faster than he ever did it before.

Straight Line Push

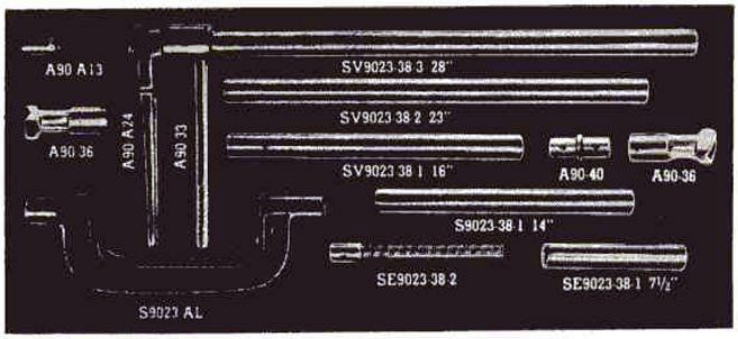
This Snap-on Spring Spreader works in a straight line established between the spring eyes, developing the greatest thrust at the point where it is most needed. "V" block pads engage the spring eyes without danger of wedging the eye open or breaking it off . . . a guide on the pressure screw prevents it from turning and forcing the "V" blocks out of position. The *ball-bearing ratchet assembly* takes the thrust from *both ends* and works freely under the greatest pressure. Reverse action is instantly obtained by means of a convenient lever on the ratchet head . . . the pressure screw is accurately machined with a low pitch thread for easy ratchet action and *smooth, steady, safe power.*

Saves Many Hours Working Time

Shops everywhere have felt that here is one tool they cannot afford to be without . . . the many labor hours it has saved them have paid its cost many times. You'll find it will save money for you and at the same time, enable you to work easier and with more safety.



Here is the Snap-on Spring Spreader on a 1939 model showing the direct straight-line power action.



Spring Spreader Set for V-8 Models

SV-9023-38—V-8 FORD SPRING SPREADER. Complete with parts listed below .....

List of "V-8" Spring Spreader Parts

Stock No.	Description	Price
*A-90-A24	Ratchet Handle Assembly	
*A-90-33	Tube Housing Assembly with Bearing	
A-90-A13	Pressure Screw	
*A-90-36	90° "V" Block (2 Req'd). Each	
*A-90-40	Round Adaptor	
SV-9023-38-1	16" Tube	
SV-9023-38-2	23" Tube	
SV-9023-38-3	28" Tube	

Extra Parts Not Included in "V-8" Set

*S-9023-AL—Yoke (Used for Model "A").....
*SE-9023-38-2—Short Pressure Screw.....
*S-9023-38-1—14" Tube .....
*SE-9023-38-1—7½" Tube .....
A-90-44—Adaptor. Enables the use of Hydra-Pak parts on the Ford Spring Spreader .....

Set for English Type "Baby" Fords

SE-9023-38—FORD SPRING SPREADER. Complete with all parts marked* .....

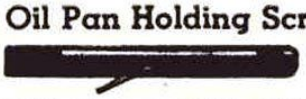
Piston Pin Removers and Inserters



It's an easy job to remove or replace Ford Piston Pins with these tools . . . does the job quickly and eliminates all danger of damaging the pin. To remove pin, insert the shank through the pin and screw the nose on until tool is set tightly in the pin. Tap the nose with a hammer to jar the locking ring loose and the pin is easily withdrawn. To insert pin in piston, assemble the pin in the tool in above manner, heat the piston to expand pin hole, insert nose of tool and tap it through piston and connecting rod bearing until the locking ring seats itself and pin is in place.

S-9026—PISTON PIN TOOL for V-8 Models. Each.....

Ford Oil Pan Holding Screws



These tools will positively save time and labor while replacing oil pans on Ford cars. Insert the screws into bolt holes on opposite sides of the crank case flange. Lift the oil pan up over the screws so that the springs catch the flange and hold it in place. Both hands are then free to replace the bolts.

S-9080 OIL PAN SCREWS. (2 required.) Each.....

Shock Absorber Link Tools



S-8658—Specially designed to remove Ford shock absorber link ball joints from their setting. The tapered fork is easily inserted around the pin and under the ball . . . a few hammer blows on the end of the handle frees the joint through the wedge-like action of the fork. The long handle (18") puts the anvil end out in the open where you can get a good hammer contact. Jaw opening is 5/8" wide. Each.....

A-200—Similar in design to above but with a ¾" jaw opening. A general purpose separating tool for work on shock absorber link ball joints, Pitman arms, tie rods and steering knuckles on most cars. Each.....

Note: These tools are not built as and should not be used as general pry bars.

Ford Shock Absorber Adaptor Bushing

When using the S-9092-A Shock Absorber Separator shown above to separate the absorber link from the perch pin on 1934 and earlier V-8 models, it is necessary to place this special adaptor bushing over the perch pin arm to provide sufficient leverage to force the separation.



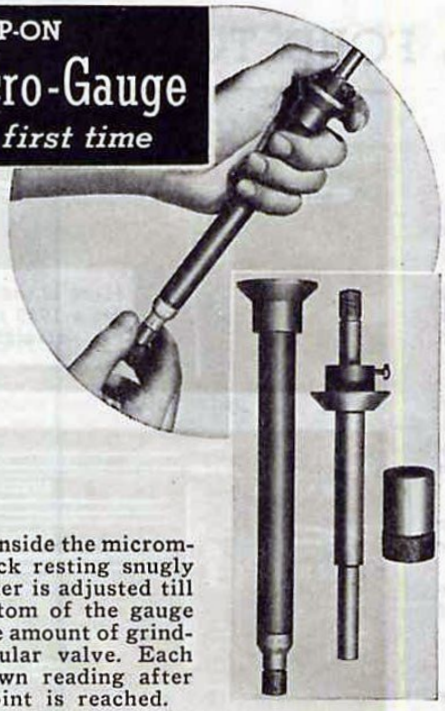
S-9092-A1 ADAPTOR BUSHING. Each.....

For Twenty-five Years the Standard of Highest Quality

Ford Specials

USE THE SNAP-ON Ford Valve Micro-Gauge

Fit 'em right the first time



For Models A, B, V8-85 Fords Mercury and Lincoln-Zephyr

YOU'LL know the exact valve setting to a minute fraction with this gauge which is graduated in .001" . . . and do the job accurately, easily.

The gauge is placed in the valve guide hole and rests on the feeler gauge and tappet . . . the "V" block rests on the valve nut and is set at that point on the gauge.

It is then removed and placed inside the micrometer sleeve with the "V" block resting snugly in the sleeve . . . the micrometer is adjusted till its anvil just touches the bottom of the gauge shaft and the reading shows the amount of grinding necessary on that particular valve. Each valve can be tested to its own reading after grinding until the correct point is reached.

MG-1—FORD VALVE MICROMETER GAUGE. Complete.....

Valve Bushing Removers and Grinding Bushings

SIMPLE and easy to use, without danger of injury to valve stem, bushings, or guide hole. Simply remove spring and raise valve. Drop Bushing Remover around the valve stem. Tap valve lightly from the top to dislodge the two sections of the bushing. When bushing is out, remove valve from block, take Grinding Bushing which is made in two sections and held together by a spring clip. Snap valve stem into Grinding Bushing. Insert the assembly in guide hole for grinding operation. These tools offer the correct and cheapest way to handle the job.



S-9010—FORD VALVE BUSHING REMOVER. Each .....(S)
S-9011—FORD GRINDING BUSHING. Each.(S)
S-9011-S—Extra Spring for above. Each.....(S)

Special Units for Model "V-8"

NSV-9010—"V-8" VALVE BUSHING REMOVER. Each .....
SV-9011—"V-8" GRINDING BUSHING. Each(S)
SV-9011-S—Extra Spring for SV-9011. Each.(S)

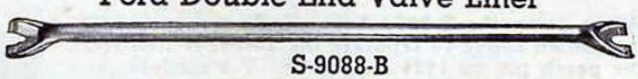
Note: The Grinding Bushings are worth their cost merely for their convenience in setting tappets.

Special Unit for Late '38 and '39 "V8-85's"

The late '38 and '39 V8-12's have less clearance between the valve head and valve seat than earlier models, and this tool is needed to remove the bushings. The flat spring handle allows the tool to be placed without pinching the fingers and prevents the tool from falling into the exhaust port . . . it does not interfere with the use of the tool.

★SS-9010-A—VALVE BUSHING REMOVER. Each.....

Ford Double End Valve Lifter



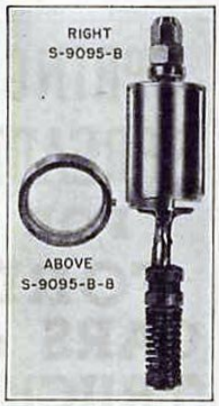
S-9088-B

Designed to service Ford valves on both the 85 and 60 series. Two tools in one at lower cost. Ample strength is provided through the use of the finest steel and the heads reinforced by side ribs.

S-9088-B—FORD VALVE LIFTER. Each.....

V-8 Valve Assembly Puller

Patent Applied For



ONE tool that does two jobs — drives the valve guide down to permit removal of the key retainer . . . pulls the entire valve assembly out of the block without once removing the tool from the job. The S-9095-B works on Ford "V8-85 H.P." motor, Mercury, and Lincoln-Zephyr. Does a fast, efficient job . . . no more broken valve lifters, broken parts, or bruised fingers. Working time for removing valve assemblies can easily be halved. Housing of the tool is cut at an angle to rest on the motor block and insure a direct pull. A ball thrust bearing takes the load and makes it easy to pull the tightest assembly.

The S-9095-B-8 is an equalizer and is used underneath the puller housing when working on the right bank of Lincoln-Zephyr motors in order to equalize the difference in the set of the two blocks. This insures a straight pull on the valve assemblies in the right bank.

FIG. 1—Valve is raised by compressing the spring and the driving portion of the tool inserted under the valve head.

FIG. 2—Valve spring is released and the tool lowered into place with valve head resting squarely inside the puller. The pressure nut is turned to the end of driving shaft and struck a few hammer blows to force the valve guide down.

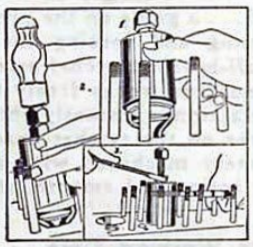


FIG. 3—Valve Key is removed and pressure nut tightened to pull entire assembly up into the sleeve of the tool.

S-9095-B — VALVE ASSEMBLY PULLER — For V8-85, Mercury, and Lincoln-Zephyr. Each.....
S-9095-B-8 — ADAPTOR FOR LINCOLN-ZEPHYR. Each.....

Ford Valve Guide Hole Cleaners

(For Power Operation)

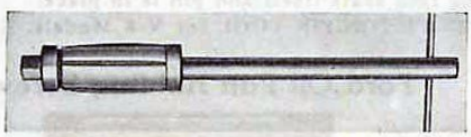
You'll know the valve guide hole is really clean after you use these tools . . . no gum . . . no carbon . . . no scale is left. The square spring stock blades are extremely rigid and give a fine cutting action. Built to work in ¼" electric drill; correct tension is regulated by an adjusting nut.



★BC-25—$^{25}/_{32}$" VALVE GUIDE CLEANER for V8-60 Ford. Each .....
★BC-25-11—Set of 11 blades for BC-25.....
★BC-31—$^{31}/_{32}$" VALVE GUIDE CLEANER for V8-85 Ford. Each .....
★BC-31-13—Set of 13 blades for BC-31.....

Ford Valve Guide Hole Cleaner

(Hand Operated)

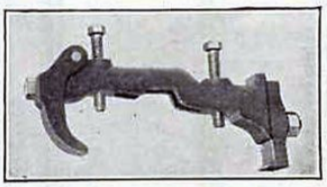


Blades of this expansion type Valve Guide Hole Cleaner are made of tempered spring steel and can be reversed to present a new cutting edge . . . they can also be resharpened by holding the flat edge against an emery wheel to remove the rounded corner. Tool is designed primarily for hand operation, but can be used in an electric drill.

★VC-2733—VALVE GUIDE CLEANER. Expansion $^{27}/_{32}$" to $1^{1}/_{32}$". Each .....
★VC-2733-5—Extra set of blades for above cleaner.

Ford Cylinder Head Puller

Patent Applied for



Pressure is distributed evenly over four points by the pressure screws.



Showing the S-9099 tools in use on Ford "V8-85" cylinder head.

SIMPLE in construction . . . *works like an ice man's tongs.* Two clamps are required, one for each end of the cylinder head. The cross pieces are placed directly across the head, resting on the first straight row of *three* bolts at each end of the head, with the pressure screws directly above the two outer bolts in these rows. The clamps are then tightened, the inner one until it grasps the curvature of the head—the outer one until it has forced itself a sufficient distance into the gasket and between block and head, so that it provides good support at the outside edges of the head where the metal is thick and the section strong. (Two units are needed.)

S-9099—V8-85 TOOL (2 needed). Pair.....

★S-9099-E—Pressure Screws only. Each.....

V-8 Perch and Spring Bushing Driver



Remove Ford spring shackle or perch bushings, or insert new ones with this efficient tool . . . fast, safe, and easy to use it will quickly pay for itself in time saved on these operations. Services all perch and spring shackle bushings on all Ford passenger cars. To remove bushings, the threaded end of the Driving Shaft is screwed onto the bushing which is driven out by hammer blows on the Driver. To insert new bushings the Pilot Nut is screwed onto one end of the bushing and inserted into shackle. The Collar is placed over the bushing to guide and protect it during the operation. Driving Shaft is screwed onto outer end of bushing which is then driven into place with hammer blows on the Driving Shaft head.

★S-9090-B—FORD BUSHING DRIVER SET.....

Driver Parts

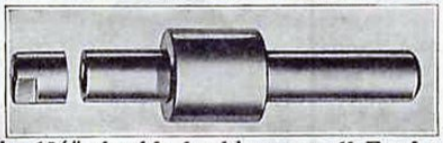
★S-9090-B-1—Driver Shaft only.....

★S-9090-B-2—Driver Collar only.....

★S-9090-B-3—⅞" Hardened Washer only.....

★S-9090-C-5—Pilot Nut only.....

Ford Truck Shackle Bushing Driver



Handles the 1⅛" shackle bushings on all Ford trucks since 1932 models. Used for removing old and inserting new bushings. All parts fit properly and have plenty of strength to handle these heavier jobs.

★S-9090-K—Ford Truck Bushing Driver Set.....

Driver Parts

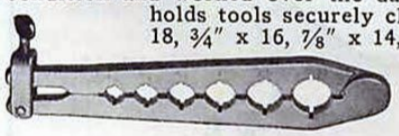
★S-9090-K-1—Driving Shaft only.....

★S-9090-K-2—Driver Collar only.....

★S-9090-K-3—Pilot Nut only.....

Axle Rethreading Tool

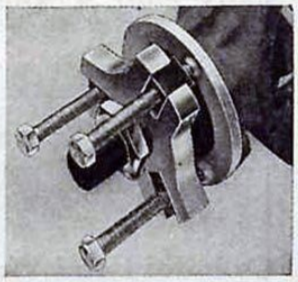
Six of the most generally used sizes in one handy tool. Can be clamped around that part of axle where thread is in good condition and worked over the damaged part. End clamp holds tools securely closed. Takes sizes ⅝" x 18, ¾" x 16, ⅞" x 14, 1" x 14, 1⅛" x 12, and 1¼" x 12.

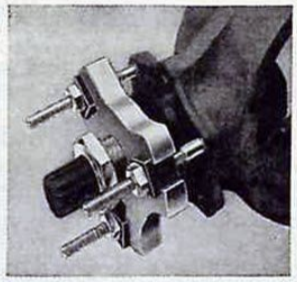


★AR-6 — AXLE RETHREADER. Each...

Pinion Shaft Puller

For A, B, V-8 Fords, Mercurys, Lincoln-Zephyrs





Left-hand picture above shows the proper set-up for pulling a Ford Pinion Gear Assembly with the S-8660. At right the assembly is shown being replaced.

This tool is a real time-saver when you have to install new Ford Pinion Shaft Assemblies or install new bearings. It is not necessary to disassemble the rear axle . . . simply remove one lock nut that holds the assembly together, and then with this tool you can remove the assembly in a few minutes . . . and it's just as easy to put it back in place. It is not necessary to heat the housing when this tool is used. Two sizes of Pinion Shafts are encountered, and this tool handles both sizes. Instructions included.

★S-8660—PINION SHAFT ASSEMBLY PULLER. Complete as illustrated .....

Ford "V-8" Conn. Rod Sockets



Specially designed double hexagon sockets for connecting rod bearing work on Ford cars. Standard sockets are not suitable for this job.

★S-9025-A—9/16"SOCKET for Model "V8".....

★S-9001—21/32" SOCKET for Model "A".....

Drag Link Screw Driver



★No. 050—A short bladed offset type screw driver especially suitable for Ford drag link work. 7½" long, ½" octagon stock, blades ¾" wide, 5/32" thick, ¼" deep. Each..

Ford Brake Eccentric Wrench



A special Open End wrench for handling the 1939 and later Ford passenger car and truck hydraulic brakes. Just right for easy, fast work. Openings are ¼" and ⅜".

S-8652—BRAKE ECCENTRIC WRENCH. Each.....

Ford Brake Adjusting Wrench



Use this wrench for speeding up brake adjusting work on all model Fords . . . the 11" length allows you plenty of leverage to break loose rusted-on or frozen nuts . . . the 7/16" and ½" openings handle both passenger cars and trucks. It does an accurate adjusting job easier and faster than any other tool you could use. Drop forged.

S-9078-A—FORD BRAKE ADJUSTING WRENCH. Each.

Blue-Point Thread Restorers



A few strokes across battered threads produce a true new thread—nut will then go on easily. These tools are real trouble and time savers.

★No. 1124—Thread Restorer—Has 8 thread sizes—11, 12, 13, 14, 16, 18, 20, and 24 threads to the inch. Each.....

★No. 1127—Thread Restorer—Has 9, 10, 15, 16, 20, 26, 28, and 32 threads to the inch. Each.....

SPECIAL BUICK AND CHEVY TOOLS

Buick Spark Plug Sockets

Special extra deep hexagon sockets for removing or replacing the spark plugs used on various Buick models. Fits Master ½" square drive handles.

S-9803-A—$^{5}/_{16}$" DOUBLE HEX. BUICK SPARK PLUG SOCKET. Each.....

S-9803-B—⅞" SINGLE HEX. BUICK SPARK PLUG SOCKET. Each.....

Buick Dash Control Socket

Built expressly for the job of removing and replacing the panel switches for the heater, defroster, panel light, headlight, etc., on Buick models. The tips are precisely machined to fit these switches, and the length of the socket is 1¾". Fits Midget (¼" square drive) handles.

S-9829—BUICK DASH CONTROL SOCKET. Each.....

Buick-Chevy Cylinder Head Wrenches

S-9513-C—¾" ADAPTOR BOXOCKET that reaches around the rocker arms for easy tightening and testing of Chevy cylinder stud nuts. Can be used with Torqometer (page 62) or any standard ½" drive wrench handle. Each.....

S-9825—⅝" ADAPTOR BOXOCKET for Buick cylinder head stud nuts. Used with Torqometer (page 62) or any ½" square drive wrench handle. Each.....

S-9825-A—¾" ADAPTOR BOXOCKET designed to simplify the job of servicing the cylinder stud nuts on certain Buick cars. The head is broached to accept a half inch square drive handle. For precision tightening and testing of the cylinder bolt tension we recommend its use with the Snap-on Torqometer (page 62). Each.....

Buick-Chevy Valve Spring Compressor

Adaptable to all Buick and Chevrolet cars and many other autos with overhead valve motors. It is a speedy and mighty efficient little tool to use and compresses these springs with an easy one-hand movement. The swinging foot rests on the block with one of the interchangeable studs in the bolt hole. Studs fit Buick and Chevy. Has three handle adjustment holes on the fulcrum post. The jaws always ride parallel to the motor block.

VL-15—SPRING COMPRESSOR. Each.....

Chevy Oil Pan Holding Screws

Save time and labor while replacing the oil pan. Screw into bolt holes on opposite sides of crank case flange; slip oil pan over until springs catch and hold the pan in place leaving your hands free to replace the bolts.

S-9595—OIL PAN SCREWS. (2 required.) Each.....

Chevrolet Head Locater Tool

Provides an easy and safe method of locating head bolt holes on Chevrolet cars. After head bolts are removed, the dowel ends are screwed into the second and seventh holes by means of the handle portion of the unit which, because of its left hand threads, unscrews itself when the dowels are securely seated in the bolt holes. The cylinder head can now be removed and replaced with perfect alignment of bolt holes as the tapered tops of the dowels extending above the cylinder block serve as a hinge in removing, and as a locater when returning the head. The dowels also hold the gasket in position during the operation. The use of this tool avoids the danger of breaking off the rocker arm feed line . . . helps eliminate heavy straight-up lifting of the cylinder heads. Shaft is 5" long, ⅜" diameter. Additional dowels to fit Buicks are also available.

GA-55 —CHEVROLET HEAD LOCATER. Complete (shaft and two GA-55-2 dowels).....

GA-55-1—Shaft only. Each.....

GA-55-2—Chevrolet Dowel Ends. Each.....

GA-55-3—Buick Dowel Ends. Each.....

Chevy Water Pump or Fan Pulley Puller

Water pump hub pulleys on all Chevy models from 1938 through 1942 were made of pressed steel, and will bend out of shape unless pulled with uniform pressure. The center of this puller is bored out 1" in diameter and ⅝" deep to fit snugly over the hub . . . when pressure is applied a cramping action is created and side strain is absorbed by the hub, making it impossible to bend the pulley regardless of the pressure applied. The tool also fits most models of General Motors trucks.

NO. 102—WATER PUMP HUB PULLER.....

Chevrolet Valve Spring Compressor

Designed for fast, efficient operation on Chevrolet and other cars having overhead valve engines with springs up to 1⅜" in diameter and 2¼" in length. The single-action lever compresses the spring and locks securely—all in one motion—and leaves both hands free to remove or replace the valve keys. It eliminates prying on the cylinder head and is safer to use; as it is not positioned on a stud, it cannot break the boss around the stud hole. A sliding wedge under the handle adjusts to three positions to vary the jaw capacity.

VL-30—CHEVROLET VALVE SPRING COMPRESSOR. Each.....

Chevy Axle Bearing Puller

Pulls both the grease retainer and bearing in one operation . . . made to handle late Chevrolet model rear axles. Works with BR-15 Puller tool (see page 69).

BRA-15A—AXLE BEARING PULLER. Each.....

Chevy Universal Joint Assembly Tool

Patent Applied For

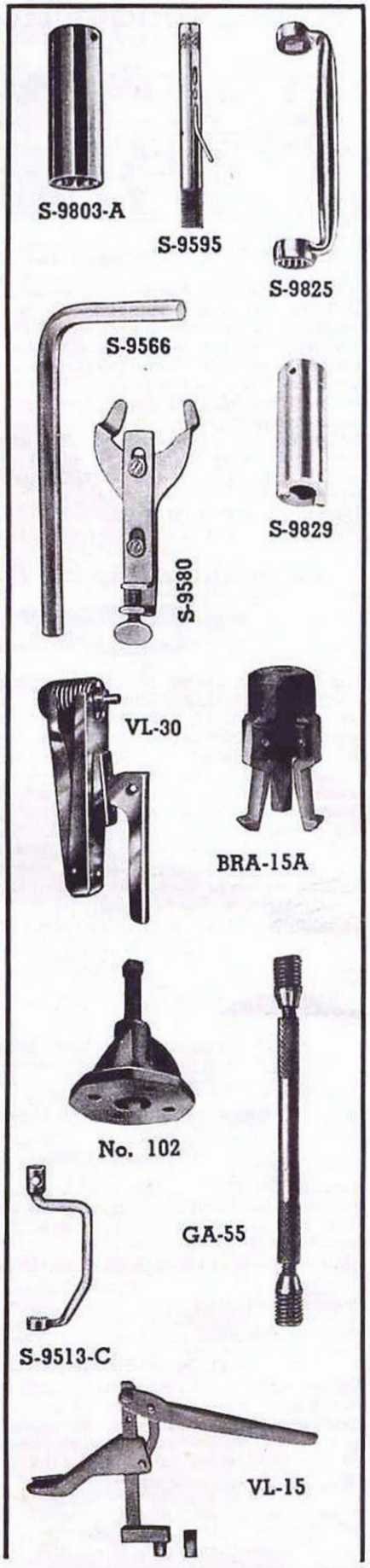
Holds the inner section of the universal joint securely in position while the joint is being assembled. Once the tool is in place both hands are left free to do the actual assembly work. It is a very simple matter to slip the engaging jaws under the universal section and screw tightly the middle sliding jaw. Quick—efficient—easy to use. The tool can also be used on Pontiac universals.

S-9580—UNIVERSAL JOINT TOOL. Each.....

Camber Adjustment Wrench On All G.M. Cars

This special length ¼" Allen Set Screw Wrench is just the ticket for handling the camber adjustment on all General Motors cars. Handle length is 4⅞"; wrench end length is 2¼".

S-9566—CAMBER ADJUSTMENT WRENCH. Each.....



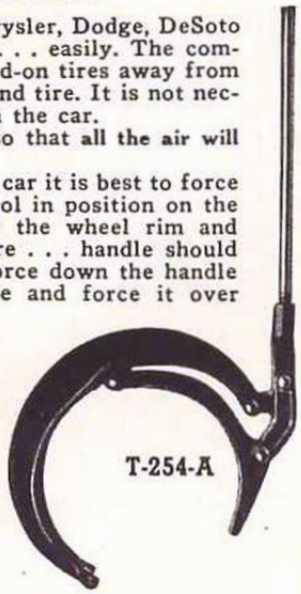
MISCELLANEOUS SPECIAL TOOLS

Tire Remover for Chrysler Line Safety Rim Wheels

This tool removes tires from Chrysler, Dodge, DeSoto and Plymouth wheels—speedily . . . easily. The compound leverage forces even rusted-on tires away from the rim with safety to operator and tire. It is not necessary to remove the wheel from the car.

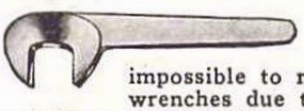
FIRST—Remove the valve core so that all the air will escape.

SECOND—With the wheel on the car it is best to force the outside off first. Place the tool in position on the tire with the notched arm over the wheel rim and small arm against the side of tire . . . handle should be to the outer side of wheel. Force down the handle to break loose outerside of tire and force it over the wheel ridge and down into the well. Push this side of the tire over the ridge around the entire circumference. Reverse position of the tool and force off the other side of the tire. To use on a dismounted wheel, hold the wheel between your legs and proceed as above.



T-254-A—TIRE REMOVER.
Each .....

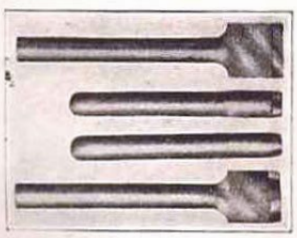
Chrysler Camber-Castor Wrench



Castor-camber eccentric adjusting nuts on 1941 Chrysler-line cars are impossible to reach with ordinary open end wrenches due to insufficient clearance. This wrench has a ¼" head thickness to fit between the arms on either side of the adjusting nut, and it eliminates the removal of these arms in order to obtain clearance to adjust the castor-camber eccentric properly. Not needed on DeSoto Taxicab, Chrysler New Yorker, Saratoga and Imperial.

S-9460—1 7/16" CASTOR-CAMBER ADJ. WRENCH. Each.....
S-9461—1 9/16" CASTOR-CAMBER ADJ. WRENCH. Each.....

Gasket Cutter Set



Consists of four cutting punches of various shapes and sizes. These tools will do a great many cutting operations and form many intricate patterns. They may be used to cut gaskets, floor mats, running board mats, rubber, lead, linoleum, felt fibre, and other similar materials. These cutters will be sold only in sets.

GA-40—CUTTER SET.....

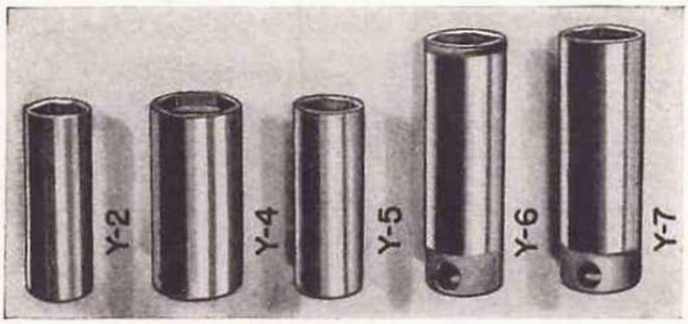
Water Pump Locater



This tool enables you to install the water pump to block with ease from a standing position. No need to wait until the gasket is firmly stuck in place . . . or to have to remove the pump because the gasket is out of position or folded over. The dowel ends are screwed into the block by means of the center shaft which, because of left hand threads, unscrews itself when the dowels are bottomed in the bolt holes. Gasket and pump are positioned over the dowels and bolted on through other bolt holes. Dowels are then removed with the center shaft used counter-clockwise.

GA-62 —WATER PUMP LOCATER. Complete (shaft and two dowels).
GA-62-1—Center Shaft only. Each.....
GA-62-2—Dowel Ends only. Each.....

Aviation Spark Plug Sockets



Y-2—11/16" single hexagon spark plug socket for Champion Plug No. M3-7S. Overall length of this socket is 2¾" and the square drive is ½". Each.....

Y-4—1" single hexagon spark plug socket for Bendix Plug No. 2986S-BG. Socket is 2¾" overall length and has a ½" square drive. Each.....

Y-5—¾" single hexagon spark plug socket for Bendix Plug No. 7-KLS and other ¾" spark plugs. 2¾" overall length, ½" square drive, depth of broach ½". Each.....

Y-6—⅞" single hexagon socket that will fit any and all spark plugs of this size on the market today. A special fibre insert protects the threads on shielded plugs. A cross-bar hole drilled through the top of the socket accepts a ⅜" diameter bar handle, and the end is broached to take ½" square drive wrench handles. Overall length is 3⅝". Each.....

Y-7—1" single hexagon socket suitable for use on any spark plug having a 1" nut. Like the Y-6 this socket has an inserted fibre insert to protect threads on shielded plugs and is drilled to accept a ⅜" diameter bar handle. Overall length is 3⅝" and the square drive is ½". Each.....

Special For Pontiac Brakes



Specially designed to handle Brake Adjusting work on Pontiac brakes. Built to work around or through all interfering parts such as frame fittings, etc. Blades just the right thinness and width to do an accurate fast, and easy job. Drop Forged.

You'll save much time and effort when working on Pontiac brakes if you have this convenient tool.

S-9153—BRAKE ADJ. TOOL. Each.....

Oldsmobile-Pontiac Starter Wrench



Here's a tool that really sneaks in behind the starter housing and motor block and takes off those nuts that you can't even get your fingers on. Developed for Olds and Pontiac, but is also mighty useful on many other cars. It is a 10" long, slender, double end crowfoot Boxocket with ⅝" wrench opening and ½" square drive opening for use with any ½" square drive ratchet or other handle.

S-8164—⅝" STARTER WRENCH. Each.....

ALPHABETICAL INDEX

THIS catalog lists standard mechanics' tools only. We also manufacture a complete line of special units for Power Production and Maintenance Work. In addition, we also make production run quantities of special wrenches designed to customer's specifications. Send us your specifications for quotations. We shall be glad to mail a copy of our Industrial Wrench Catalogs, giving specifications of our power and impact sockets to any Plant Official, or Purchasing Agent requesting same on company letterhead.

Snap-on Socket Wrench Equipment

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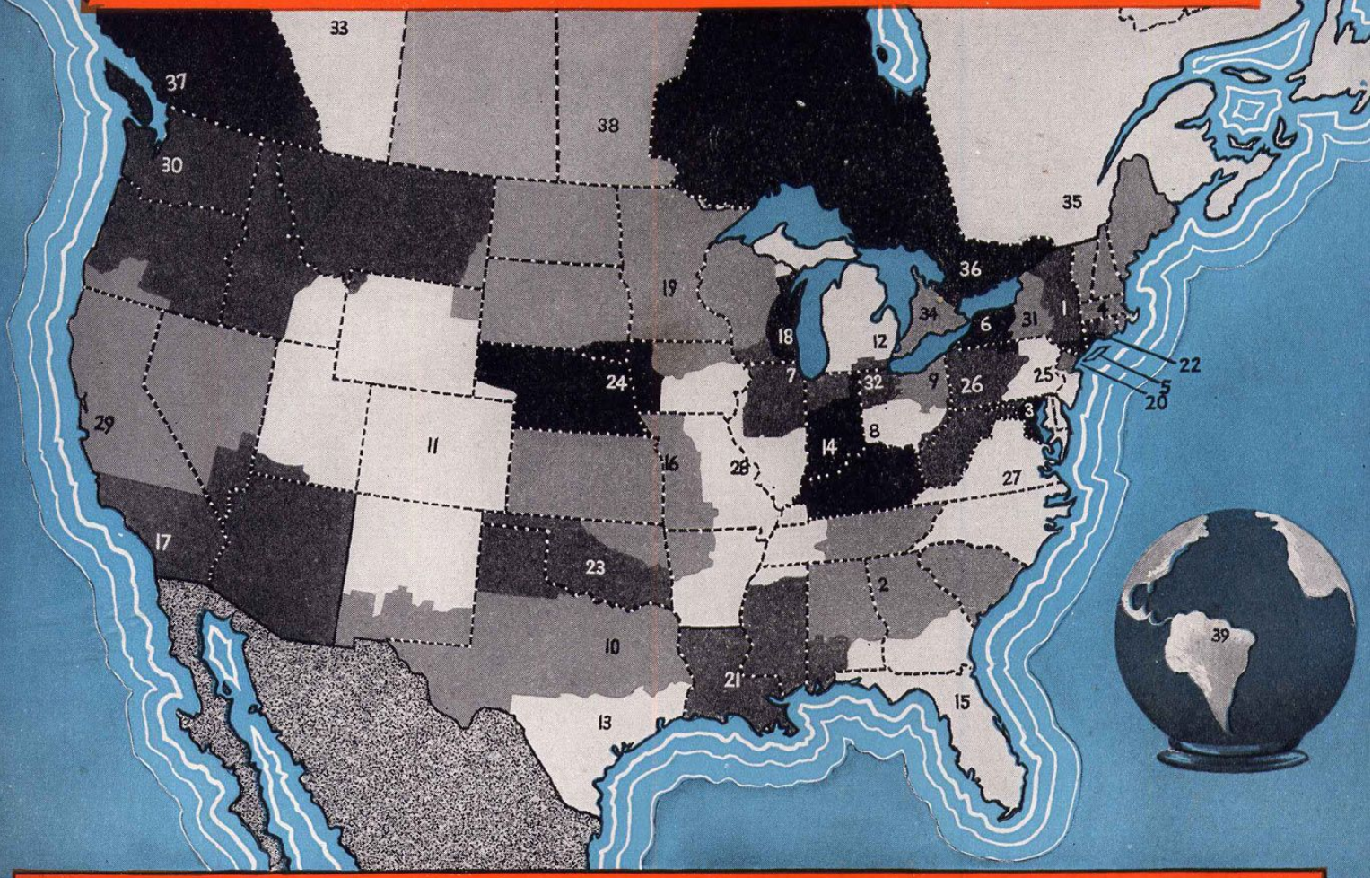
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